BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION

DOCKET NOs. 02___-EI, 02___-EI
FLORIDA POWER & LIGHT COMPANY

IN RE: PETITION FOR DETERMINATION OF NEED FOR PROPOSED ELECTRICAL POWER PLANT IN MARTIN COUNTY OF FLORIDA POWER & LIGHT COMPANY

IN RE: PETITION FOR DETERMINATION OF NEED FOR PROPOSED ELECTRICAL POWER PLANT IN MANATEE COUNTY OF FLORIDA POWER & LIGHT COMPANY

TESTIMONY & EXHIBITS OF:

ALAN S. TAYLOR

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF ALAN S. TAYLOR

DOCKET Nos. 02___EI, 02___EI

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 economic and financial analysis of power supply options.

Q. Please describe your education and professional experience.

A. I received a Bachelor of Science Degree in Energy Engineering from the Massachusetts Institute of Technology and a Masters Degree in 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 17 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, 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. Have you previously testified before this Commission?

A. Yes. I testified in Docket 001064-EI, Petition for Determination of Need for Hines Unit 2 Power Plant by Florida Power Corporation (FPC). I served as an independent evaluator in FPC's 2000 solicitation of proposals for new power supplies.

Q. What is the purpose of your testimony?

A. I was retained to assist Florida Power & Light (FPL) in conducting its solicitation for competitive power supplies. The purpose of my testimony is to describe my role as an independent evaluator and present my findings. I reviewed FPL's solicitation process and performed a parallel and independent economic evaluation of the proposals and self-build options that were available to FPL. I will discuss the process and tools that I used to conduct that parallel economic evaluation. Based on the results of my independent evaluation, I concluded that the Martin/Manatee FPL portfolio described in this docket's Need Study is the least-cost portfolio that meets

FPL's resource needs. In fact, I do not believe that there is any alternative portfolio that comes close to exhibiting the reliable and low-cost qualities of the recommended portfolio.

Q. Are you sponsoring an exhibit in this case?

A. Yes. I have a composite exhibit, Exhibit _____, consisting of Documents AST-1, my resume, and AST-2, Sedway Consulting's independent evaluation report.

Q. Are you sponsoring any sections in the Need Study document?

A. No.

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

A. I reviewed the August 13, 2001 Request for Proposals (RFP), FPL's 2001 Ten-Year Site Plan, and the questions and answers that were posted on FPL's website following the pre-bid workshop. Prior to the receipt of proposals, I requested that FPL run its detailed economic evaluation tool – Stone and Webster Management Consultants' EGEAS model (originally developed by Electric Power Research Institute) – and provide results that I could use to calibrate Sedway Consulting's bid evaluation model. Once FPL received the proposals, I was sent the economic/pricing portions of each proposal, redacted to remove the identities of the bidders and the locations of the projects. All

materials were cataloged by proposal ID number. FPL conferred with me on a number of issues relating to proposal disqualification decisions, interpretation of bid information, clarification requests, and economic evaluation assumptions. In my review of the proposals, I developed and forwarded bidder clarification questions to FPL. As the evaluation progressed, FPL and I discussed appropriate modeling assumptions in both evaluation tools. Using Sedway Consulting's Response Surface Model (RSM), I developed rankings of all of the proposals and FPL self-build options. Also, with the RSM results, I developed portfolios of low-cost resources and assessed the overall costs of such portfolios. I reviewed FPL's EGEAS runs to confirm consistency of assumptions and reasonableness of results, and I documented the entire process in an independent evaluator's report (Document AST-2, attached as an exhibit to my testimony).

Q. Turning first to the process of the solicitation, do you believe that the RFP was an adequate document for soliciting proposals?

A. Yes. As one who has developed dozens of such utility resource RFPs, I believe that FPL's RFP struck a good balance between being sufficiently detailed without being overly burdensome on the respondent. I think that the number and quality of the proposals that FPL received is a testament to the RFP's adequacy. And to the extent that information was not provided or clearly represented in the RFP, the Pre-Bid Workshop and the RFP website posting of questions and answers afforded potential bidders an opportunity to

supplement and improve their understanding of FPL's needs and proposal requirements.

Q. Do you believe that FPL's evaluation process was conducted fairly?

A. Yes. I believe that the outside proposals and FPL self-build options were evaluated on an equal footing, with consistent assumptions and analytic approaches applied to all relevant resource options at each stage of the evaluation.

Q. Please describe Sedway Consulting's RSM model and its use in FPL's solicitation.

A. The RSM is a spreadsheet model that I have used in solicitations around the country. 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 involves calculations that are based entirely on my interpretation and 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, prior to the opening of the bids, I requested that FPL execute a specific set of runs with its detailed evaluation model, EGEAS. With the results of these runs, I was able to calibrate the RSM to approximate the production cost results that EGEAS was likely to 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; instead, I would be able to insert my own inputs into my own model and independently evaluate the economic impact of any particular bid. In short, the RSM provides an independent assessment to help ensure against the 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 EGEAS results?

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

Q. So the majority of the RSM's calculations are in no way affected by the EGEAS model?

A. That is correct.

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

A. This is the area of system production costs. These costs represent the total fuel, variable operation and maintenance (O&M), and purchased power costs that FPL incurs in serving its customers' loads. 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, EGEAS simulates the dispatch of FPL's system and forecasts total production costs for each year of the study period. At the outset of the solicitation project, the RSM was populated with annual system production cost results that were created by the EGEAS 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 annual 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 bids and self-build options. I used a reference resource with a high variable cost of $100/MWh. In fact, I

could have picked any variable cost for the reference resource and obtained the same relative ranking of bids 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. Note that the RSM is described in more detail in the independent evaluation report that is attached to my testimony. However, a quick numerical example can give one a sense of the RSM's proposal ranking process.

Assume that a utility has a one-year resource need of 1,750 MW and must select one of the two following proposals:

	Bid A	Bid B
Capacity:	1,750 MW	1,750 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). Bid A is more expensive in terms of fixed costs, but Bid 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 bid is less expensive in a total sense for the utility system as a whole.

Assume that the RSM has been calibrated and populated with the following production cost information:

For a 1,750 MW proxy resource, the utility's one-year total system production costs are:

- $2.500 billion for a $100/MWh energy price reference resource
- $2.479 billion for a $50/MWh energy price resource
- $2.416 billion for a $20/MWh energy price resource

Thus, the energy savings (relative to the selection of a $100/MWh reference resource) are $84 million for Bid A with its $20/MWh energy price and $21 million for Bid B with its $50/MWh energy price. In its bid 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 bid. Converting the energy savings in this numerical example into $/kW-month equivalent values yields the following:

$84 million / (1,750 MW * 12 months) = $4.00/kW-month

$21 million / (1,750 MW * 12 months) = $1.00/kW-month

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

	Bid A	Bid 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**

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

Bid A will require total capacity payments of $189 million (= 1,750 MW x $5.50/kW-month x 12 months), and Bid B will require $115.5 million (= 1,750 MW x $5.50/kW-month x 12 months). Thus, Bid A has fixed costs that are $73.5 million more than Bid B.

Bid A will provide $63 million more in energy cost savings (= $84 million - $21 million); however, this is not enough to warrant paying $73.5 million more in fixed costs. Therefore, Bid B is the less expensive alternative.

Q. **With that understanding of the RSM process, let's return to the question of independence. How is the RSM an independent analytical tool if its production cost information is based on initial EGEAS results?**

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). On a minor note, I did identify some peculiar results that were diagnosed as an incorrect assumption about system gas supplies; this error resulted in EGEAS switching some of the Ft. Lauderdale units to burn their backup fuel (i.e., oil). That anomaly was corrected in EGEAS and supplemental results were provided for the RSM. Having verified that the RSM production cost values were "smooth," I was confident that inputting variable cost parameters into the model for similar proposals would yield similar production cost results. Although the RSM was not a detailed model and could not simulate FPL's production costs with EGEAS' accuracy, in the end, the independent RSM evaluation results tracked the EGEAS results quite well.

Q. Once the RSM was calibrated, what happened next?

A. I reviewed excerpts from all of the proposals that FPL received. The excerpts were redacted summary sheets from the specific pricing forms that FPL had included in its RFP. These forms requested specific information (e.g.,

contract capacity, capacity pricing, commencement and expiration dates, heat rates, etc.) that facilitated a consistent review of all offers.

All of the forms had the identities of the bidders redacted and replaced with a bid identification number. Thus, I reviewed all of the proposals on a "blind" basis. Where information was missing or ambiguous, I contacted FPL and suggested clarification questions that might be forwarded to the appropriate bidders. Dr. Sim, of FPL's Resource Planning department, was the only person who communicated with the bidders. Over the course of the evaluation, I conferred with Dr. Sim and his colleagues concerning revisions to proposal assumptions based on bidders' responses to clarification questions or on internal assessments.

Q. What do you mean by internal assessments?

A. There were some proposal assumptions that were determined internally by FPL. For example, initially, all proposals involving natural-gas-fired projects were assumed to require firm gas transportation from the Florida Gas Transmission (FGT) pipeline. A second pipeline – Gulfstream – has recently been completed in Florida that can offer firm gas transportation at significantly lower costs. Dr. Sim, with the assistance of FPL's Energy Management and Trading Group, determined general locations that could reasonably access the Gulfstream pipeline to obtain firm gas transportation service from that new line. That internal assessment yielded a list of

proposals that we jointly agreed to model (in both EGEAS and the RSM) with lower firm gas transportation costs based on projected Gulfstream pipeline prices.

Q. What other significant proposal assumptions or modeling issues did you discuss with the FPL evaluation team during the course of the evaluation?

A. There were a number of minor points, but the major ones were addressed in discussions pertaining to the following six areas:

1. Future resource costs that would be incurred at the end of short-term transactions and the related "lumpiness" of resource additions in EGEAS
2. Firm gas transportation issues
3. Capacity pricing for duct-fired proposals
4. Equity penalty
5. Residual value of resource lives beyond 2030
6. Transmission integration costs

Q. What do you mean by "future resource costs" and the "lumpiness of resource additions in EGEAS"?

A. There are several issues here that concern the evaluation of proposals of varying size or duration. Focusing first on the issue of varying duration, FPL received proposals for contract terms of anywhere from 3 to 25 years. In

order for one to compare the value of a short-term option with that of a long-term option, one must make some assumptions about the future costs of new resources. In other words, to compare a 3-year contract with a 25-year contract of the same capacity, one needs to assess the likely costs of acquiring or developing new capacity in years 4 through 25. If one believes that very low-cost options may be available in 4 years, the economic advantage may tilt toward the 3-year contract. Alternatively, if one believes that future resource costs may be high for years 4 through 25, the 25-year contract may appear more attractive. Of course, the fundamental comparison is directly dependent on the proposed prices inherent in both transactions. But to put both proposals on common footing, one needs to "fill in" behind the 3-year contract with some estimate of future resource costs or market prices that will be available to the buyer in those interim years. Thus, in both EGEAS and the RSM, future resource costs were characterized by a "filler" unit.

Q. What assumptions were used in EGEAS and the RSM for the filler unit?

A. The RSM assumptions are discussed in more detail in the independent evaluation report. Briefly, the RSM used FPL's generic estimates of a greenfield combined-cycle facility similar to the Manatee project that was selected in this evaluation. The filler had the same capacity, heat rates, variable O&M costs, annual incremental capital requirements and start-up costs. Its construction and fixed O&M costs were higher to account for the greenfield nature of the facility. Also, its firm gas transportation costs were

based on the FGT tariff, rather than the lower Gulfstream rate, because FPL's Energy Marketing and Trading Group did not believe that there would be a continuing significant difference in FGT's and Gulfstream's firm gas transportation costs. In total, the filler assumptions resulted in a combined-cycle facility that was rather low-cost – lower than virtually every outside proposal for a combined-cycle facility that FPL received. Of the 19 combined-cycle facilities that were offered for service in 2005, only one was less expensive than the filler unit. Thus, short-term proposals were afforded a favorable assumption with regard to the replacement capacity that FPL would need to acquire or develop upon the expiration of the proposed contract.

Q. Was every short-term proposal replaced with a 1,107 MW combined-cycle filler resource?

A. No. The RSM sized the replacement capacity for each short-term proposal to equal the size of the expiring contact. All costs were scaled accordingly. Thus, small proposals were replaced with a small filler resource that had all of the economy-of-scale benefits of a large 1,107 MW generating plant.

Q. Did EGEAS follow the same process?

A. No, although the final result is similar. EGEAS looks at the FPL system more comprehensively. EGEAS maintains FPL's 20% reserve margin by selecting proposals (during the 2005 and 2006 time frame) and full-scale filler

resources (in the later years) to supplement FPL's existing fleet of resources. The EGEAS process is described more fully in Dr. Sim's testimony.

Q. So EGEAS would replace a small short-term contract with a full-scale 1,107 MW filler resource?

A. No. There are many factors that EGEAS examines in determining the timing of resource additions. The expiration of a purchase contract is just one of them. Other factors include system load growth, retirements of other existing resources (if any), and the amount of surplus capacity (above the 20% reserve margin) carried over from a previous year. Therefore, a small contract might expire in a particular year with no resource addition replacing it immediately. Ultimately, EGEAS develops future resource plans that supplement every combination of 2005-2006 proposals with the necessary filler resources over time to maintain FPL's 20% reserve margin. Even though the EGEAS and RSM filler methodologies were different, they inherently captured the same general effect – namely the replacement of expiring short-term contracts with effectively the same amount of capacity.

Q. But, in EGEAS, couldn't the timing of the 1,107 MW filler resources in the years following 2006 distort the overall cost of a portfolio of 2005-2006 resources?

A. Yes. And that is a refinement that our discussions lead to. The original EGEAS optimizations used a single large filler resource. If one portfolio was

slightly smaller than another portfolio, it could trigger the addition of an entire filler resource in the last year of the long-range resource plan. This problem was unpredictable; it neither favored nor disadvantaged outside proposals in that it could just as easily burden FPL portfolios as outside portfolios with excessive costs.

Q. Was this problem what you referred to earlier as the "lumpiness of resource additions in EGEAS?"

A. Yes.

Q. Was anything done to address this?

A. Yes. In response to this concern, FPL provided EGEAS with other, smaller filler alternatives (e.g., a combustion turbine filler and option) so that the future resource plans that the model developed on top of 2005-2006 bid portfolios were less "lumpy." Thus, the potential economic distortions of varying future resource plans were minimized.

Q. The second item on your list of discussion issues involved firm gas transportation. What was discussed and decided there?

A. I have already mentioned the designation of some resources as having lower firm gas transportation costs because of their access to the Gulfstream pipeline. In addition, FPL and I discussed two other firm gas transportation issues that are significant.

First, there were some proposals – including bids that are in the top-ranked portfolios – where the bidders proposed to acquire firm gas transportation for their facilities at a fixed price. In some instances, FPL determined that it could probably acquire firm gas transportation for less than the quoted fixed price. In these circumstances, the evaluation team decided to use the lower FPL value, thereby favoring the proposal beyond what was explicitly stated as the terms of the offer.

Second, after seeking guidance from FPL's Energy Marketing and Trading Group, the evaluation team decided to assume that there would be no firm gas transportation charges for peaking capacity – either in the form of a peaking proposal or in the form of duct-fired capacity associated with a combined-cycle proposal. This had a very significant economic impact on the cost of a peaking proposal that was part of many top-ranked portfolios. Without firm gas transportation, this proposal's power supply would not be as reliable a source of generation as with it. Indeed, the proposal's gas supply plans were somewhat questionable – relying on an unannounced, yet-to-be-developed pipeline that apparently would provide firm gas transportation for free. Absent the development of that pipeline (and its unusual transportation arrangement), the bidder would need to pursue alternative plans that may not have been covered in its proposal pricing. It is important to note that the inclusion of firm gas transportation would have added more than $6/kW-month or $285 million (present value) to the cost of the proposal. By

not adding the costs of firm gas transportation to this proposal – as was done with all other gas-fired proposals and FPL's options – the bid evaluation team was applying very favorable assumptions.

Q. You mentioned duct-fired combined-cycle proposals. Please explain what you mean and discuss the third issue concerning capacity pricing for duct-fired proposals.

A. Duct-firing is a technology for combined-cycle facilities that allows an operator to generate higher output from the facility, but at the expense of efficiency. Combined-cycle units are generating facilities that utilize the waste heat of the exhaust gases from combustion turbines. This waste heat is used to produce steam that drives a steam turbine generator for additional electric output. Duct-firing is a technology whereby gas-fired burners can supplement the waste heat and allow the facility to generate more electricity. However, duct-firing is not very efficient. Therefore, generally it is only used for periods of peak demand. For most hours, such duct-fired combined-cycle facilities run at their base capacity (i.e., without duct-firing).

Initially, FPL assumed that all bidders who had proposed a duct-fired combined-cycle facility had included capacity pricing in their proposals that was meant to apply only to the base capacity. Thus, the duct-fired capacity did not have any capacity pricing associated with it. Because this was contrary to what I had seen in other solicitations, I encouraged FPL to contact

at least those bidders with duct-fired proposals that were in the top-ranked portfolios at the time. Three bidders were contacted. All three confirmed that their capacity pricing was meant to apply to the total capacity of their offers – base plus duct-fired. Similar lower-ranked bidders were never contacted on this point. Thus, their proposals may have been represented too favorably, but their low ranking made this a moot point.

Q. Item #4 on your list was the equity penalty. What is that and how was it applied to the evaluation process?

A. An equity penalty is a cost associated with contracting for power from an outside party. Rating agencies tend to 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, causing rating agencies to downgrade their opinion of the utility's creditworthiness and increasing the utility's cost of borrowing. Thus, an equity penalty was calculated for each top-ranked proposal to represent the additional cost to FPL of rebalancing its capital structure were it to contract for the power associated with each proposal. This value was summed for all outside proposals in a portfolio and added to the portfolio's total cost.

Q. Please describe the issue of residual value.

A. The residual value concept is associated with any resource that continues to have costs or value beyond the end of the study period (i.e., beyond 2030). None of the outside power purchase proposals extended beyond the end of the study. However, the FPL self-build options are likely to continue to operate beyond the 25-year time frame that formed the basis of the revenue requirements calculation for these resources. Thus, the costs of the self-build options were premised on FPL's customers paying for the capital costs over 25 years; but the customers will continue to enjoy the benefits of the power for operating lives that are likely to be 35 years or more. Given that, I calculated the present value of the net benefits of an additional 10 years of capacity from the FPL self-build options. I used a conservative estimate of the value of the capacity (i.e., an estimate of the market price that may be associated with capacity in that time frame) and assumed that FPL customers would continue to pay fixed O&M costs and incremental capital costs (with the latter at reduced levels) to keep the facilities running. The net benefit of the capacity was calculated as the facilities' capacity value minus the costs.

Q. Did FPL's analysis include a residual value calculation?

A. No. Therefore, I believe that the FPL analysis understated the value of the FPL options. This is one of the primary reasons that the cost differences (between the All-FPL portfolio and the competing portfolios) depicted in Sedway Consulting's results are greater than those depicted in FPL's results.

Q. How were transmission integration costs factored into the evaluation?

A. In the final consideration of portfolios, various portfolios were analyzed to determine what transmission integration investments might be necessary to accommodate the development and receipt of power injections from specific points of delivery. This determination requires significant effort and transmission system modeling. Thus, the FPL evaluation team opted to send only the top-ranked portfolios for analysis. The results showed that transmission integration costs may add from $19 million to $128 million (present value) to the cost of a portfolio, depending on the specific geographic configuration of the resources in each portfolio. Some of the lower-ranked portfolios were not analyzed. These lower-ranked portfolios, which included all outside proposals, were found to be over $300 million more expensive than the top portfolio, even without any transmission integration costs added. Thus, no determination of such costs was warranted. It is therefore worth noting that, in the case of some of the lower-ranked portfolios of proposals, the final analysis results reflect an overly favorable view.

Q. What were the final results of the evaluation?

A. The top portfolio included two FPL projects – the conversion of two CTs (and the addition of two more) at FPL's Martin generating facility to a 4-on-1 combined-cycle facility and a similar complete 4-on-1 combined-cycle facility at FPL's Manatee generating station. Both projects will be essentially the same type of facility, providing 1,107 MW each of summer capacity. Because

the Martin expansion project will be converting two existing CTs that currently provide 318 MW of capacity, the net additional capacity from that project will be 789 MW. Thus, this portfolio of FPL self-build options will provide a total of 1,896 MW of summer capacity, meeting the FPL's minimum requirement of 1,722 MW. This portfolio was found to be at least $36 million less costly than the next best portfolio. That next best portfolio also included the Manatee project, along with two outside bidders' proposals. A complete list of the top-ranked portfolios is provided in the independent evaluation report.

Q. What do you conclude about FPL's solicitation?

A. I conclude that the All-FPL portfolio is the least-cost portfolio and concur with FPL's decision to move forward with the Martin expansion and Manatee combined-cycle projects. I believe that the process yielded the best results for FPL's customers while treating developers fairly. The FPL RFP was sufficiently detailed to provide necessary information to bidders, and the pre-bid workshop and subsequent posting of questions and answers on FPL's website provided additional mechanisms for obtaining and providing additional information. I believe that the economic evaluation methodology and assumptions were appropriate and unbiased (or, in some instances, even gave outside bidders a generous benefit of the doubt). I believe that the independent evaluation procedures provided a cross-check of FPL's bid representation in EGEAS and confirmed FPL's EGEAS results. Finally, I

conclude that the All-FPL portfolio of the Martin and Manatee projects is the most cost-effective portfolio by at least $36 million. In addition, I believe that the recommended portfolio represents a more reliable combination of proposed resources than any of the other top-ranked portfolios. In fact, I do not believe that there is any alternative portfolio that comes close to exhibiting the reliable and low-cost qualities of the recommended portfolio.

Q. Does this conclude your testimony?

A. Yes.

RESUME OF ALAN S. TAYLOR

AREAS OF QUALIFICATION

Competitive bidding resource selection, integrated resource planning, risk assessment, market analysis 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 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.

- Managed the technical and economic appraisal of cogeneration facilities and brownfield generation sites.
- 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

2001- **Testimony Concerning Competitive Bidding Solicitations**
pres. 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- **Regulatory Support of Commission Staff**
pres. Client: Utah Division of Public Utilities

Assisting staff for the Utah Division of Public Utilities in the division's efforts to analyze PacifiCorp's Strategic Restructuring Proposal (SRP). Mr. Taylor's efforts are primarily focused on the area of the proposed power supply agreements that will govern the sale of power from PacifiCorp's proposed new unregulated generation company to the regulated distribution company.

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- **Solicitation for New Resources**
2001 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 the 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- **Solicitation for New Resources**
2000 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 **Forecasting of Electricity Market Prices**
Client: various European clients

Helped develop electricity market prices for regional electricity markets in Austria, Belgium, France, Germany, and the Netherlands. Mr. Taylor worked with a project team in Europe to develop simulation models and databases to forecast energy and capacity prices in the deregulating European 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.

1997 **Analysis/Testimony Concerning Kentucky Utilities' Fuel Adjustment Clause**
Client: Kentucky Industrial Utility Customers

Performed a detailed examination of Kentucky Utilities' fuel adjustment clause and recommended more appropriate allocations of costs among jurisdictional and non-jurisdictional customers. Particular emphasis was placed on inter-system sales (and the line losses associated with such sales), purchase power fuel costs, the correct determination of 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.

1995 **Environmental Compliance Analysis**
Client: Western utility

Performed a confidential detailed environmental analysis that involved executing hundreds of production simulations of the client utility's system (using PROSCREEN II) to analyze SO_2, NO_x, and particulate reductions associated with different fuel-switching, capital investment, and retirement scenarios.

1994-1996 **Implementation of Continuous Emission Monitoring Regulations**
Clients: Various

Assisted over 80 utilities in ensuring their compliance with the CAAA's continuous emission monitoring (CEM) regulations (40 CFR Part 75). Using *75check*, a CEM quality assurance software system developed by Hagler Bailly, Inc., the project team analyzed the electronic data reports that utilities must file with the U.S. EPA on a quarterly basis. These reports contain detailed hourly emissions information for every CAAA-affected plant and serve as the foundation for the SO_2 emission allowance market.

1994 **Evaluation of Big Rivers' Clean Air Act Compliance Plan**
Client: Kentucky Industrial Utility Customers

Performed a detailed analysis of Big Rivers Electric Corporation to determine the appropriate SO_2 emission reduction strategy that the utility should undertake to comply with the 1990 Clean Air Act Amendments (CAAA). The utility's historical operations were studied and dozens of hourly production cost simulations of Big Rivers' utility system were performed to assess the operational and economic impacts of different CAAA compliance strategies. Risk/sensitivity analyses were undertaken to determine the affects of varying assumptions of fuel prices, capital costs, and operating and maintenance costs. Mr. Taylor testified before the Kentucky Public Service Commission, endorsing the implementation of a specific incentive ratemaking methodology that would encourage the utility to minimize its compliance costs.

1994 **Fuel Procurement Audit of Columbia Gas Company**
Client: Public Utilities Commission of Ohio

Assisted in a fuel procurement audit of Columbia Gas Company in Ohio. The utility's gas transportation programs were scrutinized to ensure that full service customers were not subsidizing transportation customers. Cost allocation procedures were studied and marginal costs of service for transportation customers were examined. In addition, the audit included an investigation of how the utility calculated and monitored unaccounted-for-gas.

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**
Cient: 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.

1992-1993 **Integration of DSM Programs into Utility IRP Filing**
Client: Public Service Company of Colorado

Assisted utility in DSM modeling and IRP optimization using PROSCREEN II/PROVIEW. A data transfer system was designed to translate DSM program information from various utility departments. Simulations were performed to assess the cost-effectiveness of different demand- and supply-side options.

SELECTED PUBLICATIONS AND PRESENTATIONS

"Ancillary Services, A Market Unto Itself" Financial Times Energy Conference: Navigating the New Transmission Roadmap Under FERC Order 2000, June 2000.

"Forecasting Ancillary Service Prices," Infocast Conference: How to Buy, Sell, and Price Ancillary Services in Competitive Markets, October 1999.

"Fundamentals of Electricity Deregulation," American Association of Petroleum Geologists/Electric Power Research Institute Conference, April 1999.

"The Coal/Natural Gas Balance in a Reconfigured Utility Industry," American Bar Association Conference on Electricity Law and Regulation, February 1998.

"Asset Divestitures in the Deregulating Power Markets," Hybrid U.S. Power Market Conference, February 1998.

Modeling Renewable Energy Resources in Integrated Resource Planning, D. Logan, C. Neil, and A. Taylor, National Renewable Energy Laboratory, May 1994.

Regulatory Treatment of Electric Utility Clean Air Act Compliance Strategies, Costs, and Emission Allowances, K. Rose, M. Harunuzzaman, and A. Taylor, The National Regulatory Research Institute, December 1993.

"Risk Management Under the 1990 Clean Air Act Amendments: A Study of Emissions Allowance Reserves," Electric Power Research Institute, November 1993.

"Regulatory Accounting for Acid Rain Compliance Planning," 8th Biennial Regulatory Information Conference, September 1992.

"A Seminar on the Techniques and Approaches to Integrated Resource Planning," Hawaii Public Utilities Commission, September 1992.

"A Comparison of the Uranium and Emissions Allowance Markets," A. Taylor and M. Yokell, Electric Power Research Institute, February 1992.

"State Regulation of Utility Compliance Plans and Its Impact on the Emissions Allowance Marketplace," 103rd National Association of Regulatory Utility Commissioners Annual Convention, November 1991.

"Repowering and Site Recycling in a Competitive Environment," A. Taylor and E.P. Kahn, Lawrence Berkeley Laboratory, March 1991.

Sedway Consulting, Inc.

INDEPENDENT EVALUATION REPORT FOR FLORIDA POWER & LIGHT'S 2001 SOLICITATION FOR NEW POWER SUPPLIES

Submitted by:

Alan S. Taylor
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Boulder, Colorado

March 5, 2002

Introduction and Background

On August 13, 2001, 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 2005 and 2006. The RFP noted that power supply proposals would compete with FPL's power plant construction options in addressing a capacity need of approximately 1,150 MW in 2005 and 600 MW in 2006 – for a cumulative capacity need of approximately 1,750 MW.

Sedway Consulting, Inc. (Sedway Consulting) was retained in September to advise FPL in the economic evaluation of responses to the RFP and to provide a parallel economic evaluation of the proposals. Alan Taylor, Sedway Consulting's president and the individual who provided all of the consulting services for this project, has assisted numerous utilities around the country in similar solicitations for power supplies.

On September 28, 2001, FPL received proposals from 15 power suppliers. Many of these proposals provided options for different amounts of capacity and/or different in-service dates, ultimately resulting in 81 separate options for consideration. Sedway Consulting was provided with the economic portion of all of these proposals. The identity of the bidders was, however, redacted to eliminate the possibility of bias. Thus, this independent evaluation report depicts portfolios of firm capacity resources that include bid identification numbers (FC 1 through FC 81) without revealing the identities of the bidders.

Sedway Consulting conducted its parallel economic evaluation of the proposals by using a 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 – Stone and Webster's Electric Generation Expansion and Analysis System (EGEAS). 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.

This independent evaluation report documents the evaluation process and presents the results of the solicitation. The main body of this report has been developed as a document suitable for public disclosure. 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 top-ranked resource portfolios without disclosing bidders' identities or any proposal pricing information.

The report's attachment provides confidential information on the pricing of all proposals and must be kept strictly confidential. The failure to do so could adversely impact future bidder participation in subsequent FPL power supply solicitations.

Overview of Results

Sedway Consulting found that the least-cost portfolio included two resource proposals that were offered by FPL's Power Generation Division:

- **Martin Conversion** – a conversion of two existing combustion turbines (CTs) at FPL's Martin generating station into a 4-on-1 combined-cycle (CC) facility, with the addition of two more CTs, four heat recovery steam generators (HRSG), and a steam turbine generator. The net incremental summer capacity is expected to be 789 MW.

- **Manatee Brownfield** – the development of a new 4-on-1 CC facility at FPL's Manatee generating station, with a total summer capacity of 1,107 MW.

Sedway Consulting estimated that the lowest cost portfolio of only outside (i.e., non-FPL) proposals that met FPL's resource needs would be at least $296 million more expensive (net present value, 2001 base year) than the Martin expansion and Manatee projects. This outside portfolio included three resources – two new facilities, one coming on line in 2005 and the other in 2006, that would provide power under 10-year and 25-year power purchase agreements (PPAs), respectively, and one system sale commencing in 2006 with a term of 5 years.

The lowest cost portfolio of resources that met FPL's resource needs and that included a combination of FPL options and outside bids was at least $36 million more expensive than the Martin expansion and Manatee projects. This portfolio included the Manatee project along with two outside proposals – one for a system sale commencing in 2005 with a term of 5 years and another for a new generation facility in 2006 with a 25-year PPA.

Sedway Consulting concluded that the recommended Martin-Manatee portfolio represented a more reliable combination of proposed resources than any of the other top-ranked portfolios. In fact, no alternative portfolio was found that came close to exhibiting the reliable and low-cost qualities of the recommended portfolio.

Detailed information is provided later in this report and in a confidential attachment.

Evaluation Process

Sedway Consulting received redacted portions of each proposal that contained the following economic information:

- Capacity (winter and summer; base and duct-fired, where applicable)
- Commencement and expiration dates of contract
- Capacity pricing
- Fixed operation and maintenance (O&M) and capital replacement pricing

- Transmission interconnection pricing
- Firm fuel transportation pricing
- Fuel pricing or indexing
- Guaranteed heat rate (base and duct-fired, where applicable)
- Variable O&M pricing (base and duct-fired, where applicable)
- Start-up costs.

The same information was received for 12 FPL options (which were labeled by Sedway Consulting as bid numbers 101 through 112 for 2005 in-service dates and bid numbers 121 through 132 for 2006 in-service dates). Ultimately, one of the options for the development of a combined-cycle facility at FPL's Martin generating site was duplicated for FPL's Manatee generating site. Thus, there were 13 FPL options in all. However, Sedway Consulting continued to represent the combined-cycle facility as the same resource and bid number regardless of whether the facility was located at Martin or Manatee, because the cost was the same.

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,
- special issues concerning input assumptions, and
- the process of developing cost estimates for portfolios of resources

RSM and Net Levelized Fixed Price Ranking

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

A proposal'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, fixed O&M costs, incremental capital charges, firm gas transportation reservation costs, and estimated start-up 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 in the proposal.

On the variable cost side, the RSM first developed a variable dispatch charge (in $/MWh) for each proposal for each year. This charge was calculated by multiplying the

proposal's heat rate by the specified annual fuel index price and adding the variable O&M charge.

The RSM then estimated FPL's system production costs for each year and each proposal by interpolating between production costs estimates that were extracted from a set of EGEAS runs. These EGEAS runs were performed at the start of the project and were used to calibrate the RSM by varying the capacity and annual 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 reference unit that had a high variable dispatch charge of $100/MWh. Thus, for each proposal, the RSM yielded estimates of the annual production costs that FPL would be projected to experience if the utility acquired the proposed transaction, as well as a second set of annual estimates that represented the system production costs of accepting the same sized transaction but at $100/MWh. The difference between these estimates represented the annual production cost savings that each proposal was likely to provide, relative to a common high-cost reference resource. The lower a proposal'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 proposal) and yielded a value that could be deducted 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 a proposal 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. For each in-service year (2005 and 2006), the applicable proposals were ranked in ascending order based on this net levelized fixed price. The top-ranked proposals had the lowest net levelized fixed prices, representing those proposals with the lowest fixed costs, or the greatest production cost savings, or a good combination of both.

Filler Resource

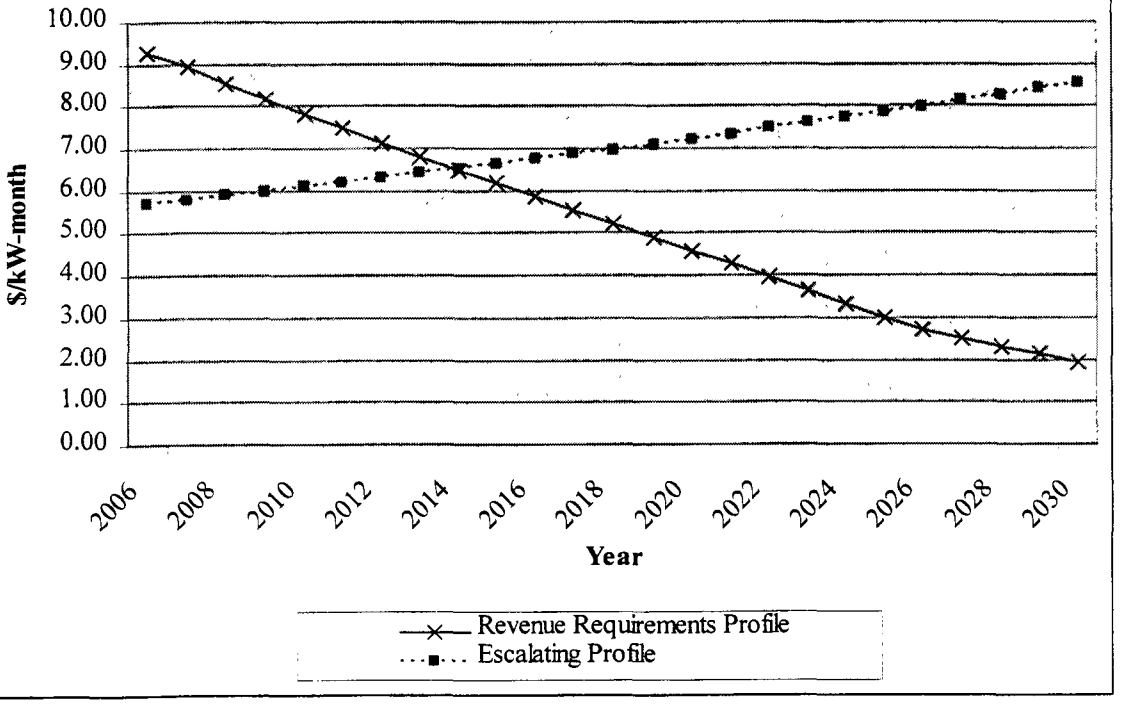
As was mentioned earlier, the RSM accounted for the costs of replacing capacity for all proposed contracts that expired before the end of the study period (which was 2030). This was done by "filling in" for the lost capacity at the end of each proposal's term of service. This allowed for a side-by-side comparison of the value of proposals that had varying contract durations. Also, the RSM had been calibrated with EGEAS runs that assumed a bid provided 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 resource as was used in the initial EGEAS optimization runs – a greenfield combined-cycle facility. The RSM scaled the replacement capacity to exactly equal the size of the expiring proposal resource. Thus, all bids 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 1,107 MW combined-cycle plant. In other words, if a 400 MW proposal ended in 2010, the RSM assumed that a 400 MW combined-cycle facility replaced it in 2011; however, the construction costs for the replacement facility were not those that would typically be associated with a 400 MW combined-cycle plant, but rather, they were a prorated portion (i.e., 400/1107) of the construction costs of a large combined-cycle facility.

Depending on the "in-service date" for the filler resource, the filler's capital costs were escalated from a 2005 base-year value by 1.7% per annum. This escalation assumption represented FPL's estimate of how construction costs were likely to increase for its self-build alternatives. Coincidentally, 1.7% was also the average annual escalation of capacity prices among the proposals from outside bidders. 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 – as was used for calculating the annual revenue requirements for all of FPL's self-build options – results in the highest capital charges in a project's first year. Thereafter, the capital-related charges decline. This is the opposite from what is usually seen in most proposals in power supply solicitations. Most proposals for power supplies 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 seen in the marketplace. This meant that the filler's first year's capacity costs were the lowest, with each year thereafter escalating at 1.7%. 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.

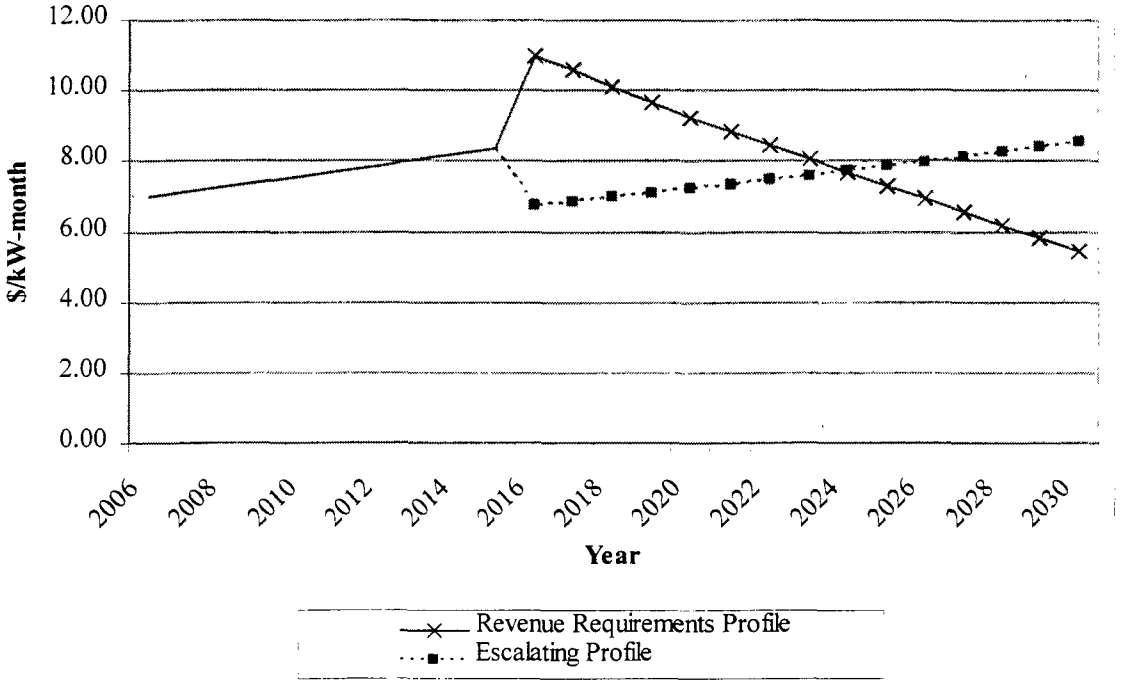
Figure 1
Comparison of Capacity Price Profiles



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 were less than 25 years in duration, 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 revenue requirements profile would present the actual annual costs that FPL's customers would pay.

Figure 2 depicts a comparison of the two approaches for replacing a hypothetical 10-year proposed power supply contract. The proposed contract is assumed to have a capacity charge that begins at $7/kW-month and escalates at 2% 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 10-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.

Another important assumption concerning the filler resource concerned firm gas transportation costs. Currently, certain generating locations in Florida have access to natural gas supplies via a new pipeline service – Gulfstream – which is likely to provide firm gas transportation at a lower cost than the tariff for Florida's primary gas pipeline service – Florida Gas Transmission (FGT). However, FPL's gas supply experts do not believe that this cost differential will last for long. Therefore, the filler resource was assumed to be supplied with gas at the FGT firm gas transportation charge of $0.76/mmBtu.

In all, the total net cost of the filler resource (in levelized $/kW-month) was lower than virtually every combined-cycle proposal that FPL received. Of the 19 combined-cycle facilities that were offered for service in 2005, only one was less expensive than the filler unit. Thus, Sedway Consulting believes that the filler resource assumptions provided a

favorable backdrop for all of the proposed power supply agreements that had expiration dates prior to the end of the study period.

Input Assumptions

Most of the input assumptions for the proposals and FPL's self-build options were directly input into the RSM in a straightforward fashion. This section addresses some unique considerations relating to:

- Timing of resources
- Fuel costs
- Duct-fired capacity
- Firm gas transportation costs
- Escalation
- Start-up costs

Timing of resources: FPL's RFP requested power supplies commencing no later than June 1 of either 2005 or 2006. Some bidders provided proposals for power by June 1; others offered to commence delivery by January 1. In both EGEAS and the RSM, all resources were assumed to commence operation on January 1 of the in-service year, thereby providing full calendar years of operation rather than having contract years that were split between two calendar years. This put all proposals on a consistent foundation.

Fuel Costs: Many bidders did not specify a fuel index and/or formula as the basis for their contract's energy pricing. Instead, they instructed FPL to use the utility's general fuel price forecast, with a fuel indexing process to be determined in negotiations. Thus, for such proposals, the evaluation relied on FPL's natural gas price forecast and presumed that the bidders would agree to a formula/index approach that would match the price at which FPL would be able to procure natural gas.

Duct-fired capacity: Some of the proposed combined-cycle facilities included duct-firing or power augmentation capabilities. A standard combined-cycle facility is one where combustion turbines consume fuel and generate both electricity and "waste" heat – the latter of which is sent through a heat recovery steam generator (HRSG) to produce steam which is fed through a steam turbine generator to produce additional electricity. Duct-firing is a technology that allows an operator to boost the total capacity of a combined-cycle facility by burning additional fuel to supplement the waste heat that is being recovered from the combustion turbine exhaust. This capacity boost has a negative impact on the efficiency of the overall facility and, therefore, is typically called on only during periods of high customer demand. Thus, a duct-fired combined-cycle facility has two portions of capacity – a base portion that is more efficient and usually runs in an intermediate/baseload operating mode and a duct-fired portion that is less efficient and usually runs in peaking mode. For each of the duct-fired proposals and FPL options, these separate portions of capacity were modeled independently in both EGEAS and the RSM. This was a preferable representation to simply modeling such a facility in one

block with a blended efficiency or heat rate in that it allowed the models to recognize the benefits of the low-cost power from the base portion and only utilize the duct-fired portion for peaking needs. This is how such facilities would be operated in reality.

At the outset of the evaluation, FPL assumed that bidders who proposed duct-fired combined-cycle facilities had submitted capacity prices that would only be applied to the base portion of the facilities (i.e., FPL would not have to pay any capacity charges for the duct-fired capacity). In Sedway Consulting's experience in other solicitations, most such bidders generally have submitted capacity pricing in their proposals that was intended to apply to a facility's total capacity, not just the base portion. During the initial phases of the evaluation, FPL made this assumption and recognized that it was giving all duct-fired proposals the benefit of the doubt. However, to ensure that the evaluation process was not proceeding on an incorrect assumption, Sedway Consulting recommended that FPL clarify this issue at least with those bidders whose duct-fired proposals were in the upper ranking of the outside proposals. Three bidders were contacted; all three instructed FPL that their capacity pricing was meant to apply to the full capacity of their bid, not just the base portion. This new information was incorporated into the EGEAS and RSM modeling. Those bidders whose duct-fired facilities were lower in the ranking (i.e., they were not in a range of being competitive) were never contacted on this issue and may have been represented in the analysis in an overly favorable fashion.

Firm gas transportation costs: It was assumed that all intermediate/baseload natural-gas-fired facilities would require firm gas transportation service to ensure reliable, uninterrupted operations. Such costs are rather significant – often adding over $3.00/kW-month to a resource's capacity-related costs. As mentioned above, there are now two major pipelines that can provide firm transportation for natural gas deliveries to specific areas of FPL's service territory: FGT and Gulfstream. The cost for firm transportation on FGT was assumed to be $0.76/mmBtu; the cost on Gulfstream was $0.60/mmBtu – a significant difference, and one that is not expected to remain for long as more customers sign up for Gulfstream capacity. FPL reviewed the location of all proposals and FPL options and identified those resources that would possibly be in a location to acquire gas from Gulfstream. All other resources were assumed to be supplied by FGT or, if a bidder included specific firm gas pricing, a bidder-guaranteed firm supply. Each resource's firm gas transportation costs were calculated as an annual fixed value that was based on the facility's maximum annual gas consumption.

After discussions with FPL's Energy Management and Trading Group, it was decided not to model firm gas transportation as a requirement for duct-fired or conventional peaking portions of proposed facilities. Particularly for duct-fired combined-cycle plants, it was recognized that FPL or a bidder probably would have some flexibility in utilizing a daily nominated quantity of firm gas for duct-firing during peak hours of the day, at the expense of reduced off-peak generation. Thus, even without firm gas transportation to serve the entire facility's daily maximum consumption, duct-fired capacity could be counted on for the peak hours.

The assumptions surrounding outside proposals for simple-cycle combustion turbine peaking facilities were trickier. Ultimately, it was decided to model such peaking proposals as not requiring firm gas transportation for any of the proposed capacity. This was a very favorable assumption for such outside proposals, particularly since such proposals did not include any back-up fuel to accommodate gas supply interruptions. It is likely that such peaking capacity would not be available during FPL's winter peaking conditions; and while gas supplies during FPL's summer peak periods have not been constrained historically, many utilities around the country are finding that summer gas supplies are getting tighter as a considerable amount of natural-gas-fired generation gets added to the nation's generating base. This new generation is reshaping the annual pattern of natural gas consumption that used to be driven primarily by winter heating loads. To the extent that this leveling out of annual gas consumption and constraints drives FPL to require firm gas transportation for peaking resources in the future, then the assumptions for the outside peaking proposals may have been overly favorable. Although the lack of firm gas transportation may negatively impact the reliability of the outside peaking proposals, the RSM modeling results were predicated on the assumption that the full capacity of these proposals would be available whenever needed.

Escalation: FPL provided forecasts of a variety of inflation indices (e.g., Consumer Price Index - Urban, Producer Price Index, Gross Domestic Product Implicit Price Deflator). Many of the outside bidders indicated that they wanted some of the prices in their proposals to escalate according to these indices. In Sedway Consulting's experience, when such escalation procedures are incorporated into a power purchase agreement, they invariably exhibit a lagging effect. In other words, if a bidder wants a project's variable O&M charge to escalate from a 2004 base value of $2/MWh by use of a published index, the first year value in 2005 will not have the benefit of the 2005 index value. That 2005 index value will not be known until 2006. Thus, Sedway Consulting assumed that there would be a one-year lag in all outside bidders' escalation formulas. In the above example, the variable O&M charge would be $2/MWh in 2005; in 2006, the charge would be escalated by the ratio of the 2005 index value over the 2004 index value. This meant that all such escalation formulas yielded a slightly lower cost than bidders may have intended. It is entirely possible that a bidder, in the negotiation process, could have insisted that the proposal pricing explicitly required annual escalation and that the lag effect should be eliminated by making the 2005 variable O&M charge equal to $2/MWh escalated by the ratio of the 2004 index value over the 2003 index value. In any event, Sedway Consulting's lag assumption may have favored some of the outside bidders because Sedway Consulting did not lag any of the escalating costs for the FPL options. As ratebased facilities, cost escalation for the FPL options was assumed to occur in real time (i.e., with no lag).

Start-up costs: The annual costs for starting up facilities (either outside bidders' or FPL options) were premised on FPL's assumption of six starts/year for most facilities. FPL determined that this was an appropriate number of starts for both intermediate/baseload and very-high-dispatch-cost peaking proposals. For standard peaking resources, FPL assumed 100 starts/year. The start-up costs were incorporated into the RSM as annual fixed costs.

Portfolio Development

The RSM provided a ranking of all outside bids and FPL options based on net levelized costs (in $/kW-month). In addition, the RSM provided for each proposal the net costs in total present value dollars. The ranking was segregated into two lists – one for resources available in 2005 and one for resources in 2006. Sedway Consulting developed potential portfolios of resources by examining combinations of the top-ranked bids/options that satisfied FPL's resource needs in 2005 and 2006. These needs were determined by FPL to be at least 1,122 MW of firm capacity in 2005 and another 600 MW in 2006 (for a total cumulative need of 1,722 MW). The preliminary total cost of a portfolio was simply the sum of the present value net costs of each of the bids/options that made up the portfolio. However, five additional elements needed to be considered in the calculation of a final total cost for each portfolio:

- Surplus Capacity
- Residual Value
- Equity Penalty
- Transmission Integration
- AFUDC Adjustment

Surplus Capacity: If a portfolio provided more than 1,722 MW in 2006, then the portfolio was deemed to have surplus capacity. This capacity had value because it would reduce the FPL's need in 2007 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 1,722 MW of capacity in its current efforts. The value of surplus capacity is dependent on the market price for capacity in 2007 and beyond. Sedway Consulting assumed a value of $5.00/kW-month in 2007, escalating thereafter at 1.7% per year. In Sedway Consulting's experience, this value has represented a low price for a standard CT-based power supply. This is a conservative value in that the price of new capacity is likely to be higher. In fact, in other solicitations, Sedway Consulting has used higher estimates (e.g., $7.00/kW-month). The present value of the surplus capacity benefits for a portfolio was deducted from the portfolio's preliminary total cost. Thus, a portfolio that was well in excess of the required capacity would have a rather high preliminary total cost (associated with the large amount of capacity in the portfolio) but would have a mitigating deduction in the form of surplus capacity benefits.

The inclusion of a surplus capacity benefit in the RSM portfolio results placed those results on a more comparable footing with the EGEAS portfolios. While no explicit surplus capacity benefit was calculated to supplement the EGEAS results, EGEAS largely captures this benefit in the long-range expansion plans that it develops for each portfolio.

Residual Value: The revenue requirements calculations for the FPL options were based on a cost recovery period of 25 years. Thus, if brought in service in 2005, they were assumed to be paid off by 2030 – the end of the study period. However, the combined-cycle projects that represented the least-cost portfolio will probably have operating lives

beyond the end of the study period. Thus, based on the revenue requirements assumptions that were used in the analysis, FPL's customers will have paid for these combined-cycle facilities by 2030 and will continue to benefit from the project's capacity for a number of years beyond that. Given this, Sedway Consulting calculated a residual value for the relevant FPL options and deducted this value from the preliminary total cost of each portfolio that included one or more of these FPL options. The residual value calculation valued the post-2030 capacity of the FPL options for another 10 years based on an escalating assumption for the value of capacity. Thus, the capacity for each relevant FPL option was multiplied by a $/kW-year value in each year from 2031 through 2040. That $/kW-year capacity value was the same $60/kW-year (i.e., $5/kW-month) – escalated out to 2031 and beyond – as was used in the surplus capacity calculation. This additional 10 years of capacity was not assumed to be free, however. Although construction costs will be entirely paid off, FPL customers will still have to pay continuing capacity-related charges such as fixed O&M, incremental annual capital costs, and start-up costs. Typically, when a facility nears the end of its operating life, the owner curtails additional investment of incremental capital costs. Thus, for the final 10 years (2031 through 2040), Sedway Consulting assumed that the annual incremental capital investments would be approximately one-half of the annual projections for the 2005-2030 time period.

The energy benefits of the FPL facilities were ignored in the residual value analysis; thus, the residual value was a conservative estimate. Indeed, it is likely that the FPL options will continue to operate at substantial capacity factors during the 10 years of the residual value period – thereby providing less expensive energy for FPL's customers (by displacing more expensive power supplies) than would be the case if the options were never developed. Because EGEAS was not run past 2030, these energy or production cost benefits were not determined. However, they could be substantial.

Equity Penalty: Rating agencies tend to 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. In some cases, it can trigger certain provisions in a utility's bond covenants that may advance the bonds' repayment schedules. Recent events in the energy industry have underscored the need for companies to maintain a strong balance sheet.

Sedway Consulting coordinated with FPL's Finance Department in developing an estimate for each proposal of the costs for FPL to rebalance its capital structure if it were to enter into a PPA with a bidder. This estimate was referred to as an "equity penalty" 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. For each portfolio, the sum of the equity penalties for whichever outside bids were in the portfolio was added to the preliminary total cost.

Transmission Integration: FPL developed estimates of the costs of integrating different portfolios of specific proposals into the FPL network. With a large addition of new generation to a utility system, several portions of the transmission grid invariably need to be reinforced. This can entail the construction of new circuits or the reconductoring and upgrading of existing transmission lines. The present value of revenue requirements for these transmission integration projects was added to each portfolio, based on the estimation of the necessary investments to accommodate each of the elements of that portfolio.

AFUDC Adjustment: Allowance for Funds Used During Construction (AFUDC) represent the financing costs associated with FPL's self-build options. These costs were estimated and included in the main evaluation. However, later refinements to those estimates resulted in some additional costs that were added to the relevant portfolios' costs as a line-item adjustment.

The final total cost of each portfolio was determined to be the preliminary total costs, minus surplus capacity benefits, minus residual values, plus equity penalties, plus transmission integration costs, plus the AFUDC adjustment.

Review of EGEAS Results

In addition to the parallel evaluation process involving the RSM, Sedway Consulting assisted FPL in a review of the EGEAS model results. This involved three activities:

- Comparing data assumptions for all bids and FPL options
- Verifying that the EGEAS output results reflected the correct input assumptions
- Examining the impacts of future generation expansion plans.

In comparing data assumptions, Sedway Consulting and FPL were able to confirm that the proposals were being interpreted correctly and that all of the latest assumptions and information from bidder clarification communications were incorporated into the EGEAS and RSM models. Sedway Consulting developed tables of information that reflected the costs and operating characteristics of each of the bids in a specific year. FPL returned the table with notations on where the utility identified differences in assumed values. Together, Sedway Consulting and FPL worked through the differences and made the necessary changes either to the RSM or EGEAS databases.

Sedway Consulting also reviewed EGEAS output reports and confirmed that the annual fixed and variable costs for the bids and FPL options matched or were reasonably close to the values that were calculated by the RSM.

The EGEAS generation expansion plans were studied by Sedway Consulting. These plans represented the model's efforts to maintain the necessary 20% reserve margin for the FPL system over time. Given FPL's annual load growth, the retirement of existing resources, and expiration of the new power supply contracts under consideration, EGEAS

had to add future generic resources in various years after 2006 to satisfy FPL's reserve margin requirements. This was a more comprehensive process than what was achieved with the RSM. The RSM simply examined single bids, one at a time, and assumed that they would be replaced with a filler resource of exactly the same size upon the expiration of the proposed PPA. EGEAS had a broader focus. However, given numerous factors that influenced the timing of the addition of new generic resources throughout the study period, the "lumpiness" of EGEAS' long-range generation expansion plans could distort the present value of a portfolio's long-term costs. This "lumpiness" comes from the fact that EGEAS adds new resources in any year in which FPL's reserve margin drops below 20% – even if the shortfall is only 1 MW. If the new resource options are large facilities, this can lead to varying levels of surplus capacity in each year. Initial concerns in this area were assuaged when FPL expanded the number and types of future generic resource alternatives (i.e., filler units) so that the long-term expansion plans exhibited a "smoother" pattern.

RSM Evaluation Results

Table 1 depicts the least-cost portfolio (the All-FPL portfolio of the Martin expansion and Manatee combined-cycle projects) and other top-ranked portfolios that represent the best combinations of FPL and outside proposals. For each element of the portfolios, the table presents the resource's capacity, in-service year, term (i.e., duration), and net cost. The net cost is developed in the RSM and was described above. Also included in the table are additional costs or credits for each portfolio pertaining to surplus capacity benefits, transmission integration costs, residual values, equity penalties, and AFUDC adjustments. The values in the far right column show the difference in costs (in millions of dollars) between the top-ranked combination portfolios and the least-cost All-FPL portfolio. All costs are 2001 present values, based on a discount rate of 8.5%.

The All-FPL portfolio is less expensive than the rest of the top-ranked combination portfolios by $36 million to $311 million. The portfolios are labeled the same as the portfolio numbers or names that have been used by FPL in its most recent evaluation materials.

Two outside proposals that factor significantly into many of the top-ranked portfolios are FC 3 and FC 65 – a pair of options that represent the same proposal with either 2005 or 2006 start years. The proposal entailed a 25-year offer for 465 MW of CT-based capacity. Although this proposal had competitive capacity pricing, its energy pricing was very high. Whereas utilities may acquire very-high-energy-cost power purchases for short periods (e.g., over a few summer months or during an unexpected major generating plant outage), Sedway Consulting does not know of any utility that has acquired such a high-energy-cost purchase for 25 years. Also, it is important to note that this particular proposal's gas supply plans were somewhat questionable – relying on an unannounced, yet-to-be-developed pipeline that apparently would provide firm gas transportation for free. Absent the development of that pipeline (and its unusual transportation arrangement), the bidder would need to pursue alternative plans that may not have been

covered in its proposal pricing. Had the evaluation team included firm gas transportation costs in the evaluation of this proposal – as was done with all other gas-fired proposals and FPL's options – it would have added over $6/kW-month or $285 million (present value) to the cost of the proposal. Given the uncertainties associated with the proposal, Sedway Consulting does not believe that the economic evaluation results tell the whole story or reflect the proposal's likely costs and risks. Thus, all portfolios with FC 3 or FC 65 in them must be viewed with the understanding that their costs may be significantly understated.

Table 1
Portfolio Comparison of Best All-FPL Portfolio and Combination Portfolios

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from All-FPL Portfolio ($M)
Best All-FPL Portfolio						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FPL #9	Manatee 4x1 Brownfield CC	1107	2005	26	$606	
	Total:	1896			$1,000	
	Surplus Capacity:	174			($81)	
	Transmission Integration:				$58	
	Residual Value:				($81)	
	Equity Penalty:				$0	
	AFUDC Adjustment:				$12	
			Net Total Cost:		$909	**$0**
February Combination Portfolio						
FPL #9	Manatee 4x1 Brownfield CC	1107	2005	26	$606	
FC 11		150	2005	5	$101	
FC 65		465	2006	25	$203	
	Total:	1722			$909	
	Surplus Capacity:	0			$0	
	Transmission Integration:				$19	
	Residual Value:				($45)	
	Equity Penalty:				$55	
	AFUDC Adjustment:				$8	
			Net Total Cost:		$946	**$36**
Combination Portfolio #1						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 3		465	2005	25	$220	
FC 58		526	2006	3	$364	
	Total:	1780			$979	
	Surplus Capacity:	58			($27)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$59	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,110	**$201**

Table 1 - continued

Portfolio Comparison of Best All-FPL Portfolio and Combination Portfolios

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from All-FPL Portfolio ($M)
Combination Portfolio #2						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 3		465	2005	25	$220	
FC 71		300	2006	3	$216	
FC 72		300	2006	10	$227	
	Total:	1854			$1,057	
	Surplus Capacity:	132			($61)	
	Transmission Integration:				$127	
	Residual Value:				($35)	
	Equity Penalty:				$73	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,167	**$258**
Combination Portfolio #3						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 19		526	2005	3	$390	
FC 65		465	2006	25	$203	
	Total:	1780			$987	
	Surplus Capacity:	58			($27)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$56	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,116	**$206**
Combination Portfolio #4						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 38		150	2005	3	$106	
FC 39		300	2005	10	$242	
FC 65		465	2006	25	$203	
FC 71		300	2006	3	$216	
	Total:	2004			$1,161	
	Surplus Capacity:	282			($130)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$72	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,201	**$291**
Combination Portfolio #5						
FC 3		465	2005	25	$220	
FC 19		526	2005	3	$390	
FC 38		150	2005	3	$106	
FPL #8	Martin Expansion CC	789	2006	25	$375	
	Total:	1930			$1,091	
	Surplus Capacity:	208			($96)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$60	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,153	**$244**

Table 1 - continued
Portfolio Comparison of Best All-FPL Portfolio and Combination Portfolios

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from All-FPL Portfolio ($M)
Combination Portfolio #6						
FC 3		465	2005	25	$220	
FC 11		150	2005	5	$101	
FC 19		526	2005	3	$390	
FPL #8	Martin Expansion CC	789	2006	25	$375	
	Total:	1930			$1,086	
	Surplus Capacity:	208			($96)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$62	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,150	**$240**
Combination Portfolio #7						
FC 3		465	2005	25	$220	
FC 8		811	2005	10	$590	
FPL #8	Martin Expansion CC	789	2006	25	$375	
	Total:	2065			$1,185	
	Surplus Capacity:	343			($159)	
	Transmission Integration:				$127	
	Residual Value:				($35)	
	Equity Penalty:				$96	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,220	**$311**
Combination Portfolio #8						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 8		811	2005	10	$590	
FC 48		150	2006	5	$92	
	Total:	1750			$1,077	
	Surplus Capacity:	28			($13)	
	Transmission Integration:				$127	
	Residual Value:				($35)	
	Equity Penalty:				$43	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,206	**$296**
Combination Portfolio #9						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 3		465	2005	25	$220	
FC 48		150	2006	5	$92	
FC 71		300	2006	3	$216	
	Total:	1704			$923	
	Surplus Capacity:	-18			$8	
	Transmission Integration:				$127	
	Residual Value:				($35)	
	Equity Penalty:				$60	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,089	**$180**

Table 2 depicts the same All-FPL portfolio and compares it to the top-ranked outside portfolios (i.e., the best portfolios that included only outside proposals). The table shows that the All-FPL portfolio is less expensive than the top-ranked outside portfolios by $296 million to $337 million. These differences do not include any transmission integration costs; therefore, the true differences are probably significantly greater.

Sensitivities

Sedway Consulting believes that the base case analysis of the proposals provided a rigorous assessment of the outside proposals and FPL options. However, it is important to consider whether changes in the study's fundamental assumptions might alter the conclusions. Probably the two most important sensitivities in this type of analysis involve changes in the assumptions concerning gas prices and future resource costs. Given that the preponderance of proposals were power supplies from gas-fired facilities, a high gas price scenario would have little effect on the cost difference between portfolios. In fact, given that the FPL options at Martin and Manatee had better efficiencies (i.e., lower heat rates) than most of the proposals in the competing portfolios, a high gas price scenario would probably increase the economic difference between the All-FPL recommended portfolio and the runners-up. The bids in the competing portfolios that did not involve gas-fired facilities were short-term system sales for a relatively small amount of capacity. Although they might have provided a slight hedge against high gas prices, their small size and short duration would have limited their effect in a high gas price sensitivity. Thus, Sedway Consulting focused on the second area (future resource costs) as an appropriate sensitivity.

Future resource costs are characterized in the "filler" resource in the RSM. The filler resource served as replacement capacity for any proposed contract that would expire before 2030. The All-FPL portfolio did not include any filler resource because the two FPL combined-cycle facilities will continue to operate through 2030 (and beyond). Thus, a scenario with higher costs for the filler resource would only have increased the costs of outside bids and thus the portfolio cost differences. The important consideration involved whether future resource costs might be lower than the base case filler assumptions. As was noted earlier, the filler resource was less expensive than virtually all of the combined-cycle bids in the solicitation. However, the FPL Manatee combined-cycle project was less expensive than the filler. And arguably the Manatee project could be delayed, with its construction following the expiration of some of the shorter-term proposals. Thus, Sedway Consulting performed a sensitivity analysis whereby the Manatee project costs were used for the filler resource, with two adjustments. First, it was assumed that the lower-cost Gulfstream firm gas transportation option would not be available in the future and Manatee would be supplied with firm gas at the higher FGT tariff rate. Second, the Manatee construction costs would be $10 million higher because of the loss of joint construction savings that will be achieved by FPL in building both the Manatee and Martin projects in the same time frame.

Table 2
Portfolio Comparison of Best All-FPL Portfolio and Outside Portfolios

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from All-FPL Portfolio ($M)
Best All-FPL Portfolio						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FPL #9	Manatee 4x1 Brownfield CC	1107	2005	26	$606	
	Total:	1896			$1,000	
	Surplus Capacity:	174			($81)	
	Transmission Integration:				$58	
	Residual Value:				($81)	
	Equity Penalty:				$0	
	AFUDC Adjustment:				$12	
			Net Total Cost:		$909	**$0**
Outside Portfolio #1						
FC 27		1200	2005	10	$813	
FC 48		150	2006	5	$92	
FC 65		465	2006	25	$203	
	Total:	1815			$1,108	
	Surplus Capacity:	93			($43)	
	Transmission Integration:				N/A	
	Residual Value:				$0	
	Equity Penalty:				$141	
	AFUDC Adjustment:				$0	
			Net Total Cost:		$1,206	**$296**
Outside Portfolio #2						
FC 3		465	2005	25	$220	
FC 19		526	2005	3	$390	
FC 38		150	2005	3	$106	
FC 71		300	2006	3	$216	
FC 72		300	2006	10	$227	
	Total:	1741			$1,158	
	Surplus Capacity:	19			($9)	
	Transmission Integration:				N/A	
	Residual Value:				$0	
	Equity Penalty:				$78	
	AFUDC Adjustment:				$0	
			Net Total Cost:		$1,228	**$318**
Outside Portfolio #3						
FC 3		465	2005	25	$220	
FC 11		150	2005	5	$101	
FC 19		526	2005	3	$390	
FC 62-64		811	2006	10	$542	
	Total:	1952			$1,253	
	Surplus Capacity:	230			($106)	
	Transmission Integration:				N/A	
	Residual Value:				$0	
	Equity Penalty:				$99	
	AFUDC Adjustment:				$0	
			Net Total Cost:		$1,247	**$337**

The results of this sensitivity analysis are shown in Tables 3 and 4 and revealed a reduction in the cost differentials between the combination portfolios and the all-FPL portfolio of approximately $30-$40 million. The most competitive combination portfolio (the February Combination Portfolio, which was found to be $36 million more expensive than the All-FPL portfolio under base case assumptions) included the Manatee project. Therefore, that particular portfolio was not considered in this sensitivity analysis as it was not in a position to delay the Manatee project and use it as a filler resource. Thus, all combination portfolios that met FPL's resource needs were found to be at least $166 million more expensive than the All-FPL portfolio. Also, this sensitivity analysis assumed that the Manatee project could be sliced up and deferred in pieces (because the outside contracts in the competing proposals expire in many different years). Obviously, this could not be accomplished in reality.

Table 3
Portfolio Comparison of Best All-FPL Portfolio and Combination Portfolios
Manatee Filler Sensitivity

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from All-FPL Portfolio ($M)
Best All-FPL Portfolio						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FPL #9	Manatee 4x1 Brownfield CC	1107	2005	26	$606	
	Total:	1896			$1,000	
	Surplus Capacity:	174			($81)	
	Transmission Integration:				$58	
	Residual Value:				($81)	
	Equity Penalty:				$0	
	AFUDC Adjustment:				$12	
			Net Total Cost:		$909	**$0**
Combination Portfolio #1						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 3		465	2005	25	$220	
FC 58		526	2006	3	$330	
	Total:	1780			$944	
	Surplus Capacity:	58			($27)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$59	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,075	**$166**
Combination Portfolio #2						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 3		465	2005	25	$220	
FC 71		300	2006	3	$196	
FC 72		300	2006	10	$216	
	Total:	1854			$1,026	
	Surplus Capacity:	132			($61)	
	Transmission Integration:				$127	
	Residual Value:				($35)	
	Equity Penalty:				$73	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,136	**$227**

Table 3 - continued
Portfolio Comparison of Best All-FPL Portfolio and Combination Portfolios
Manatee Filler Sensitivity

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from All-FPL Portfolio ($M)
Combination Portfolio #3						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 19		526	2005	3	$353	
FC 65		465	2006	25	$203	
	Total:	1780			$950	
	Surplus Capacity:	58			($27)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$56	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,078	**$169**
Combination Portfolio #4						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 38		150	2005	3	$95	
FC 39		300	2005	10	$230	
FC 65		465	2006	25	$203	
FC 71		300	2006	3	$196	
	Total:	2004			$1,119	
	Surplus Capacity:	282			($130)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$72	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,159	**$249**
Combination Portfolio #5						
FC 3		465	2005	25	$220	
FC 19		526	2005	3	$353	
FC 38		150	2005	3	$95	
FPL #8	Martin Expansion CC	789	2006	25	$375	
	Total:	1930			$1,042	
	Surplus Capacity:	208			($96)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$60	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,105	**$195**
Combination Portfolio #6						
FC 3		465	2005	25	$220	
FC 11		150	2005	5	$92	
FC 19		526	2005	3	$353	
FPL #8	Martin Expansion CC	789	2006	25	$375	
	Total:	1930			$1,039	
	Surplus Capacity:	208			($96)	
	Transmission Integration:				$128	
	Residual Value:				($35)	
	Equity Penalty:				$62	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,103	**$194**

Table 3 - continued
Portfolio Comparison of Best All-FPL Portfolio and Combination Portfolios
Manatee Filler Sensitivity

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from All-FPL Portfolio ($M)
Combination Portfolio #7						
FC 3		465	2005	25	$220	
FC 8		811	2005	10	$558	
FPL #8	Martin Expansion CC	789	2006	25	$375	
	Total:	2065			$1,153	
	Surplus Capacity:	343			($159)	
	Transmission Integration:				$127	
	Residual Value:				($35)	
	Equity Penalty:				$96	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,187	**$278**
Combination Portfolio #8						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 8		811	2005	10	$558	
FC 48		150	2006	5	$84	
	Total:	1750			$1,037	
	Surplus Capacity:	28			($13)	
	Transmission Integration:				$127	
	Residual Value:				($35)	
	Equity Penalty:				$43	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,165	**$256**
Combination Portfolio #9						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FC 3		465	2005	25	$220	
FC 48		150	2006	5	$84	
FC 71		300	2006	3	$196	
	Total:	1704			$894	
	Surplus Capacity:	-18			$8	
	Transmission Integration:				$127	
	Residual Value:				($35)	
	Equity Penalty:				$60	
	AFUDC Adjustment:				$6	
			Net Total Cost:		$1,060	**$151**

Table 4
Portfolio Comparison of Best All-FPL Portfolio and Outside Portfolios
Manatee Filler Sensitivity

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from All-FPL Portfolio ($M)
Best All-FPL Portfolio						
FPL #8	Martin Expansion CC	789	2005	26	$395	
FPL #9	Manatee 4x1 Brownfield CC	1107	2005	26	$606	
	Total:	1896			$1,000	
	Surplus Capacity:	174			($81)	
	Transmission Integration:				$58	
	Residual Value:				($81)	
	Equity Penalty:				$0	
	AFUDC Adjustment:				$12	
			Net Total Cost:		$909	**$0**
Outside Portfolio #1						
FC 27		1200	2005	10	$766	
FC 48		150	2006	5	$84	
FC 65		465	2006	25	$203	
	Total:	1815			$1,052	
	Surplus Capacity:	93			($43)	
	Transmission Integration:				N/A	
	Residual Value:				$0	
	Equity Penalty:				$141	
	AFUDC Adjustment:				$0	
			Net Total Cost:		$1,150	**$241**
Outside Portfolio #2						
FC 3		465	2005	25	$220	
FC 19		526	2005	3	$353	
FC 38		150	2005	3	$95	
FC 71		300	2006	3	$196	
FC 72		300	2006	10	$216	
	Total:	1741			$1,080	
	Surplus Capacity:	19			($9)	
	Transmission Integration:				N/A	
	Residual Value:				$0	
	Equity Penalty:				$78	
	AFUDC Adjustment:				$0	
			Net Total Cost:		$1,149	**$240**
Outside Portfolio #3						
FC 3		465	2005	25	$220	
FC 11		150	2005	5	$92	
FC 19		526	2005	3	$353	
FC 62-64		811	2006	10	$513	
	Total:	1952			$1,177	
	Surplus Capacity:	230			($106)	
	Transmission Integration:				N/A	
	Residual Value:				$0	
	Equity Penalty:				$99	
	AFUDC Adjustment:				$0	
			Net Total Cost:		$1,171	**$261**

Conclusions

Sedway Consulting performed an independent and parallel evaluation of the responses to FPL's 2001 resource RFP and concluded that a combination of FPL's conversion of its Martin CTs to a 4-on-1 combined-cycle facility and the development of a similar 4-on-1 combined-cycle facility at its Manatee site represented the lowest-cost portfolio for meeting FPL's resource needs. This All-FPL portfolio was found to be $36 million less expensive than the next best portfolio (which included the FPL Manatee project as well).

Sedway Consulting concluded that the recommended Martin-Manatee portfolio represented a more reliable combination of proposed resources than any of the other top-ranked portfolios. In fact, no alternative portfolio was found that came close to exhibiting the reliable and low-cost qualities of the recommended portfolio.

The proposal rankings of Sedway Consulting's RSM primary and sensitivity analyses are provided in the confidential attachment to this report. The attachment includes the pricing and operating characteristics of all of the qualifying proposals and FPL options reviewed by Sedway Consulting.

Confidential Attachment
RSM Bid Ranking Results

This attachment to Sedway Consulting's Independent Evaluation Report provides tables of information concerning all qualifying proposals that were evaluated in FPL's 2001 solicitation for new power supplies.

Base Case Analysis

Table A-1 depicts the results of the RSM ranking. The table is split into two sets of proposals or FPL options – those that offered power in 2005 or earlier and those that commenced in 2006. For each category of resources, the table is sorted on Net Levelized Fixed Price (in $/kW-month). As described in the main report, this value includes the fixed costs of a resource, accounts for the production cost savings associated with the dispatch of the resource, and normalizes the resulting Net Cost into a value that accounts for the size of the resource. The Net Cost (in millions of dollars) for each resource is also presented in the table and is the Net Cost value used in the portfolio development process that was represented in tables of results in the main report.

All outside firm capacity proposals (i.e., FC 1 through FC 81) are included in the table except for FC 9, which was disqualified as a tolling proposal. All of the FPL self-build options are represent in Table 3 except for FPL's option to develop a 600 MW pet-coke-fired facility. FPL's evaluation team determined that this option was not realistically available for the 2005 or 2006 time frame, given the design, permitting, and construction challenges that the project would face.

Table A-2 provides a list of the FPL self-build options with the corresponding ID number that Sedway Consulting used throughout the RSM evaluation process.

FPL noted that there were 13 self-build options that were evaluated. FPL option #109 in Sedway Consulting's list represented a combined-cycle facility at either the Martin or Manatee generating stations. Although Sedway Consulting's evaluation considered these two FPL options as one option (given that they had similar or identical costs), they actually represented two separate options. Also, the FPL option #101/#121 was modeled under two different assumptions for firm gas transportation costs. The resource was assumed to be able to acquire gas supply from Gulfstream, but a second resource (labeled FPL 101-FGT and FPL 121-FGT) was represented with FGT firm gas supply.

Table A-1
Final Proposal Ranking - FPL 2001 Resource Solicitation
Confidential

Resources with 2004-2005 Start Dates

Bidder #	Capacity MW	Levelized Fixed Price $/kW-mo	Levelized Prod Cost Savings $/kW-mo	Net Levelized Fixed Price $/kW-mo	Levelized Var Price $/MWh	Heat Rate (Btu/kWh)	Start Year	Term (years)	NPV Fixed Pmts ($M)	NPV Prod Cost Savings ($M)	NPV Net Cost ($M)
FC 3	465						2005	25			$220.3
FPL 108	789						2005	26			$394.5
FPL 109	1107						2005	26			$605.6
FPL 102	535						2005	26			$294.4
FPL 103	901						2005	26			$552.7
FPL 101	255						2005	26			$157.3
FPL 104	853						2005	26			$534.7
FPL 106	853						2005	26			$537.2
FPL 105	783						2005	26			$523.0
FC 11	150						2005	5			$100.9
FC 27	1200						2005	10			$812.9
FC 26	1200						2005	10			$792.3
FC 25	1200						2005	10			$772.4
FC 38	150						2005	3			$105.9
FC 8	811						2005	10			$590.2
FC 17	811						2005	10			$590.2
FC 22	811						2005	10			$590.2
FC 19	526						2005	3			$389.8
FC 30	1236						2005	7			$893.2
FPL 101-FGT	255						2005	26			$195.0
FC 16	300						2005	3			$229.9
FC 45	900						2005	5			$690.2
FC 42	450						2005	3			$346.6
FC 2	618						2005	7			$476.7
FC 41	300						2005	5			$234.2
FC 6	800						2005	3			$627.2
FC 43	450						2005	5			$352.9
FC 31	811						2005	26			$637.6
FC 32	811						2005	26			$637.6
FC 46	900						2005	10			$714.5
FC 12	576						2005	9			$462.1
FC 20	242						2005	5			$194.7
FC 23	242						2005	5			$194.7
FC 39	300						2005	10			$242.2
FC 44	450						2005	10			$364.9
FPL 107	1298						2005	26			$1,089.1
FC 36	250						2004	3			$232.0
FC 34	300						2004	5			$282.6
FC 33	811						2005	26			$698.3
FC 40	800						2005	10			$690.3
FC 37	250						2005	3			$215.9
FC 35	300						2005	6			$269.5
FC 7	220						2004	10			$219.6
FC 13	220						2004	10			$219.6
FC 28	257						2005	10			$237.0
FC 53	220						2005	10			$204.2
FC 54	220						2005	10			$204.2
FC 1	712						2005	10			$667.0
FC 18	257						2005	25			$250.6
FC 21	447						2004	27			$484.4
FC 10	220						2005	10			$225.1
FC 29	220						2005	25			$235.5
FPL 111	214						2005	26			$291.9
FPL 112	214						2005	26			$292.0
FC 15	224						2005	20			$345.0

Table A-1 - continued
Final Proposal Ranking - FPL 2001 Resource Solicitation
Confidential

Resources with 2006 Start Dates

Bidder #	Capacity MW	Levelized Fixed Price $/kW-mo	Levelized Prod Cost Savings $/kW-mo	Net Levelized Fixed Price $/kW-mo	Levelized Var Price $/MWh	Heat Rate (Btu/kWh)	Start Year	Term (years)	NPV Fixed Pmts ($M)	NPV Prod Cost Savings ($M)	NPV Net Cost ($M)
FC 65	465	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2006	25	[redacted]	[redacted]	$202.7
FPL 128	789						2006	25			$374.7
FPL 129	1107						2006	25			$573.5
FPL 122	535						2006	25			$281.0
FPL 123	901						2006	25			$524.2
FPL 121	255						2006	25			$151.6
FPL 124	853						2006	25			$507.2
FPL 126	853						2006	25			$509.5
FC 48	150						2006	5			$92.4
FC 24	1200						2006	10			$746.0
FPL 125	783						2006	25			$495.7
FC 49	150						2006	3			$98.1
FC 62	811						2006	10			$542.4
FC 63	811						2006	10			$542.4
FC 64	811						2006	10			$542.4
FC 58	526						2006	3			$364.3
FC 5	690						2006	6			$479.5
FC 77	900						2006	5			$644.6
FC 71	300						2006	3			$215.6
FC 74	450						2006	3			$325.0
FC 80	811						2006	25			$587.6
FC 81	811						2006	25			$587.6
FC 50	800						2006	3			$582.1
FPL 121-FGT	255						2006	25			$185.9
FC 73	300						2006	5			$219.6
FC 75	450						2006	5			$331.0
FPL 127	1298						2006	25			$960.1
FC 78	900						2006	10			$666.5
FC 57	576						2006	9			$427.2
FC 59	242						2006	5			$181.9
FC 60	242						2006	5			$181.9
FC 72	300						2006	10			$226.8
FC 76	450						2006	10			$341.7
FC 14	490						2006	10			$375.1
FC 51	800						2006	10			$633.4
FC 79	811						2006	25			$642.9
FC 61	250						2006	3			$201.0
FC 52	300						2006	6			$250.1
FC 55	220						2006	10			$188.0
FC 56	220						2006	10			$188.0
FC 47	712						2006	10			$613.3
FC 69	257						2006	10			$221.6
FC 68	257						2006	25			$234.3
FC 66	220						2006	10			$210.4
FC 67	220						2006	25			$219.5
FC 4	447						2006	20			$530.7
FPL 131	214						2006	25			$270.9
FPL 132	214						2006	25			$271.1
FC 70	224						2006	20			$318.8

Table A-2 FPL Self-Build Options		
ID numbers for in-service years of:		
2005	**2006**	
101	121	2-on-1 (Moderate) CC Ft. Myers expansion
102	122	3-on-1 (Moderate) CC Martin expansion
103	123	3-on-1 (Heavy) CC Martin expansion
104	124	3-on-1 (Moderate) CC Martin brownfield
105	125	3-on-1 (Light) CC Martin brownfield
106	126	3-on-1 (Moderate) CC Manatee brownfield
107	127	Two 4-on-1 (Light) CC Port Everglades repowering
108	128	4-on-1 (Moderate) CC Martin expansion
109	129	4-on-1 (Moderate) CC Martin or Manatee brownfield
110	130	Two pet-coke-fired Martin brownfields
111	131	CT at Sanford 4
112	132	CT at Sanford 5

FPL options #108 and #109 are the two facilities included in the All-FPL portfolio. As can be seen from Table 3, they are the second and third highest ranked resources after FC 3. The same is true in the 2006 ranking – where FPL options #128 and #129 are the 2006 versions of the Martin and Manatee projects and FC 65 is the 2006 version of FC 3. The FC 3/65 outside bid entailed a 25-year power purchase agreement (PPA) for 465 MW of CT capacity and energy. Although the proposal's capacity cost was rather competitive, the energy price was very high (with a levelized value of approximately [redacted] and Sedway Consulting believes that the proposal's economic costs were probably underestimated in the evaluation. In some regions of the country, such a resource is referred to as "paper capacity" and is occasionally acquired by utilities to satisfy short-term monthly capacity reserve requirements. Usually, such transactions are for a year or less. They are purchased by a utility for insurance purposes to cover short-term circumstances (e.g., an unexpected major outage of a large generating plant) but are rarely called on, because of their high dispatch costs. Sedway Consulting does not know of any circumstances where a utility has acquired such capacity for a term of 25 years.

In addition, although the capacity price for the FC 3/65 proposal was rather competitive (with a levelized price of less than [redacted], there is one important caveat. As was noted in the main report, the evaluation team decided to evaluate this bid without adding any firm gas transportation costs for the facility. All other gas-fired resources in the evaluation were assumed to incur firm gas transportation costs. It is important to note that this proposal did not offer a facility with back-up fuel and represented a questionable fuel supply arrangement from an unannounced, yet-to-be-developed pipeline. Had the evaluation team added firm gas transportation costs to this bid, it would have increased

the proposal's cost by $285 million (present value) or more than $6/kW-month of equivalent capacity cost. That would have placed the bid near the bottom of the ranking. Because of this favorable firm gas transportation assumption, this FC 3/65 proposal ended up in virtually all top-ranked combination portfolios and outside portfolios. Because of this proposal's very high dispatch cost and the overly favorable assumptions concerning gas transportation, Sedway Consulting does not believe that this proposal represents a reliable and beneficial addition to FPL's total system supply portfolio. Given that, Sedway Consulting focused its efforts on attempting to identify competitive portfolios of FPL options and outside proposals that represented low-cost, reliable portfolios. Sedway Consulting was unable to find any other combinations of reliable options that were less expensive than the recommended All-FPL portfolio.

Sensitivity Analysis

As discussed in the main report, Sedway Consulting performed a sensitivity analysis to examine the impact of lower future resource costs (i.e., similar to Manatee's) as a filler assumption for new capacity following the expiration of short-term contracts. The proposal ranking from the RSM is depicted in Table A-3, which provides the same information for this sensitivity analysis as is provided in Table A-1 for the base case analysis.

Table A-3
Manatee Filler Sensitivity Proposal Ranking - FPL 2001 Resource Solicitation
Confidential

Resources with 2004-2005 Start Dates

Bidder #	Capacity MW	Levelized Fixed Price $/kW-mo	Levelized Prod Cost Savings $/kW-mo	Net Levelized Fixed Price $/kW-mo	Levelized Var Price $/MWh	Heat Rate (Btu/kWh)	Start Year	Term (years)	NPV Fixed Pmts ($M)	NPV Prod Cost Savings ($M)	NPV Net Cost ($M)
FC 3	465						2005	25			$219.5
FPL 108	789						2005	26			$394.5
FPL 109	1107						2005	26			$605.6
FPL 102	535						2005	26			$294.4
FC 11	150						2005	5			$91.9
FPL 103	901						2005	26			$552.7
FPL 101	255						2005	26			$157.3
FPL 104	853						2005	26			$534.7
FPL 106	853						2005	26			$537.2
FC 38	150						2005	3			$95.3
FC 27	1200						2005	10			$765.7
FC 26	1200						2005	10			$745.0
FC 25	1200						2005	10			$725.1
FPL 105	783						2005	26			$523.0
FC 19	526						2005	3			$352.7
FC 8	811						2005	10			$558.3
FC 17	811						2005	10			$558.3
FC 22	811						2005	10			$558.3
FC 16	300						2005	3			$208.7
FC 42	450						2005	3			$314.8
FC 30	1236						2005	7			$829.8
FC 45	900						2005	5			$635.8
FC 6	800						2005	3			$570.7
FC 41	300						2005	5			$216.0
FC 2	618						2005	7			$445.0
FC 43	450						2005	5			$325.7
FC 20	242						2005	5			$180.0
FC 23	242						2005	5			$180.0
FC 46	900						2005	10			$679.0
FC 12	576						2005	9			$437.2
FPL 101-FGT	255						2005	26			$195.0
FC 39	300						2005	10			$230.4
FC 44	450						2005	10			$347.2
FC 36	250						2004	3			$212.9
FC 31	811						2005	26			$637.6
FC 32	811						2005	26			$637.6
FC 37	250						2005	3			$198.2
FC 34	300						2004	5			$263.0
FC 40	800						2005	10			$658.8
FPL 107	1298						2005	26			$1,089.1
FC 35	300						2005	6			$252.7
FC 33	811						2005	26			$698.3
FC 7	220						2004	10			$210.1
FC 13	220						2004	10			$210.1
FC 28	257						2005	10			$226.9
FC 53	220						2005	10			$195.5
FC 54	220						2005	10			$195.5
FC 1	712						2005	10			$639.0
FC 18	257						2005	25			$250.2
FC 10	220						2005	10			$216.4
FC 21	447						2004	27			$484.4
FC 29	220						2005	25			$235.2
FPL 111	214						2005	26			$291.9
FPL 112	214						2005	26			$292.0
FC 15	224						2005	20			$342.5

Table A-3 - continued
Manatee Filler Sensitivity Proposal Ranking - FPL 2001 Resource Solicitation
Confidential

Resources with 2006 Start Dates

Bidder #	Capacity MW	Levelized Fixed Price $/kW-mo	Levelized Prod Cost Savings $/kW-mo	Net Levelized Fixed Price $/kW-mo	Levelized Var Price $/MWh	Heat Rate (Btu/kWh)	Start Year	Term (years)	NPV Fixed Pmts ($M)	NPV Prod Cost Savings ($M)	NPV Net Cost ($M)
FC 65	465						2006	25			$202.7
FPL 128	789						2006	25			$374.7
FPL 129	1107						2006	25			$573.5
FPL 122	535						2006	25			$281.0
FC 48	150						2006	5			$84.1
FPL 123	901						2006	25			$524.2
FC 24	1200						2006	10			$703.0
FC 49	150						2006	3			$88.3
FPL 121	255						2006	25			$151.6
FPL 124	853						2006	25			$507.2
FPL 126	853						2006	25			$509.5
FC 58	526						2006	3			$329.9
FC 62	811						2006	10			$513.4
FC 63	811						2006	10			$513.4
FC 64	811						2006	10			$513.4
FPL 125	783						2006	25			$495.7
FC 5	690						2006	6			$444.1
FC 71	300						2006	3			$195.9
FC 74	450						2006	3			$295.5
FC 77	900						2006	5			$594.4
FC 50	800						2006	3			$529.8
FC 73	300						2006	5			$202.9
FC 75	450						2006	5			$305.9
FC 59	242						2006	5			$168.4
FC 60	242						2006	5			$168.4
FC 57	576						2006	9			$404.5
FC 78	900						2006	10			$634.2
FC 72	300						2006	10			$216.1
FC 76	450						2006	10			$325.6
FC 80	811						2006	25			$587.6
FC 81	811						2006	25			$587.6
FPL 121-FGT	255						2006	25			$185.9
FC 14	490						2006	10			$357.6
FC 61	250						2006	3			$184.6
FPL 127	1298						2006	25			$960.1
FC 51	800						2006	10			$604.8
FC 52	300						2006	6			$234.7
FC 79	811						2006	25			$642.9
FC 55	220						2006	10			$180.2
FC 56	220						2006	10			$180.2
FC 47	712						2006	10			$587.9
FC 69	257						2006	10			$212.4
FC 68	257						2006	25			$234.3
FC 66	220						2006	10			$202.6
FC 67	220						2006	25			$219.5
FC 4	447						2006	20			$526.7
FPL 131	214						2006	25			$270.9
FPL 132	214						2006	25			$271.1
FC 70	224						2006	20			$316.8