BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination of Need for Hines Unit 4 Power Plant

DOCKET NO. 040817-EI
Submitted for filing:

DIRECT TESTIMONY OF DANIEL J. ROEDER

ON BEHALF OF PROGRESS ENERGY FLORIDA

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IN RE: PETITION FOR DETERMINATION OF NEED

BY PEF CORPORATION

FPSC DOCKET NO. ________________

DIRECT TESTIMONY OF DANIEL J. ROEDER

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer, and business address.

A. My name is Daniel J. Roeder and I am an employee of Progress Energy Carolinas (PEC), 410 S. Wilmington Street, Raleigh, North Carolina, 27601.

Q. Please tell us your position with PEC and describe your duties and responsibilities in that position.

A. I am a Project Leader in the System Resource Planning Section of the System Planning & Operations Department. The System Resource Planning Section is responsible for the resource planning for both Progress Energy Florida (PEF or the Company) and PEC systems. My responsibilities are usually of the nature of special projects, such as the Request for Proposals (RFP) that is the subject of this testimony. I served as the Project Leader and “Official Contact” for PEF’s Hines 4 RFP.

Q. Please tell us about your educational background and experience.

A. I graduated from the University of Tennessee with a B.S. in Engineering Science and Mechanics in 1980, and I obtained my M.S. in Mechanical Engineering in 1982. I have been a PEC employee since 1982 and, with the exception of a one-year rotational field assignment, I have worked the entire time in the System Planning & Operations Department, performing analyses such as production costing, generation reliability, integrated resource planning, and Clean Air Act compliance. During the year prior to the completion of the merger between PEF and PEC, I was a core member of the Integration Team, working as an integration analyst. I am a registered Professional Engineer in the state of North Carolina.

Q. Have you been responsible for leading RFPs before?

A. Yes, I served as the Project Leader for the Hines 3 RFP. I also participated in two of PEC's RFPs. I was the Manager of the Resource Planning Unit and part of the team that developed PEC's first RFP, which was issued in 1996, and for which I led the Economic Evaluation Team. I was involved to a lesser extent in the second RFP PEC issued in 1997.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to describe PEF's RFP for 2007 power supply resources (the Hines 4 RFP), the proposals we received in response to the RFP, the evaluation performed on the proposals, and the results of the evaluation.

Q. Are you sponsoring any sections of PEF's Need Study (SSW-1)?

A. Yes, I am sponsoring Section IV, "Resource Selection—The 2007 Request for Proposals (RFP)" of the Need Study. I am also sponsoring the confidential Appendix J to the Need Study, "Description of Proposals."

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

Exhibit ___ (DJR-1) Results of Detailed Economic Analysis

Exhibit ___ (DJR-2) RFP Evaluation Process

Exhibit ___ (DJR-3) Summary of Proposals

Exhibit ___ (DJR-4) Threshold Requirements

Exhibit ___ (DJR-5) Results of Threshold Screening

Exhibit ___ (DJR-6) Results of Economic Screening

Exhibit ___ (DJR-7) Results of Optimization Analysis

Exhibit ___ (DJR-8) Minimum Evaluation Requirements

Exhibit ___ (DJR-9) Technical Criteria

Exhibit ___ (DJR-10) Final Results of Technical Evaluation

Exhibit ___ (DJR-11) Results of Detailed Economic Analysis-Costs by Component

I prepared each of these exhibits, and each is true and accurate.

Q. Please summarize your testimony.

A. Upon determining the need for additional generating capacity as described in the testimony of Mr. Samuel S. Waters, PEF embarked upon the RFP process. The Company followed Rule 25-22.082 F.A.C. in the development and implementation of the RFP. We issued the RFP, providing the notification required by the Rule and information about the Company's self-build alternative, Hines Unit 4. We sought proposals that would be in service by December 1, 2007 and that would be reliable, dispatchable, and technically sound. We were looking for the proposals to come from experienced, financially-sound developers that would be able to secure the necessary approvals and permits, and that had planned for an adequate fuel supply. We fairly evaluated all proposals by systematically following a structured, orderly evaluation process, which we identified in the RFP, including the criteria by which we evaluated the proposals.

Q. **Briefly, what were the results of your RFP?**

A. We received five proposals and two variations from a total of four bidders. One proposal from a bidder did not pass the Threshold Screening. The remaining four proposals and two variations from the four bidders were narrowed down to one proposal from each bidder and were compared to our self-build alternative, Hines Unit 4. We performed a significant amount of analysis, evaluating the price and non-price attributes of the alternatives. The final evaluation of the non-price attributes showed Hines Unit 4 to be one of the top two ranked alternatives in most of the categories. The detailed economic analysis found Hines Unit 4 to be over $55 million (2004 dollars) less expensive than the least cost alternative proposal. The least cost New Unit Proposal (another combined cycle plant) was found to be more than $95 million (2004 dollars) more expensive than Hines Unit 4. Exhibit ___ (DJR-1) shows the results of the analysis. Finally, we performed sensitivity analyses, in which we either gave advantages to one of the third-party proposals by assuming decreases in its costs or assumed increases in the costs associated with Hines Unit 4. In all cases, Hines 4 was the least cost alternative, demonstrating that the selection of Hines 4 is a sound choice. Based on the analyses, the Company concluded that Hines Unit 4 is the most cost-effective alternative for meeting the need for additional generating capacity beginning in 2007 to serve PEF's customers. My testimony will discuss all of the analyses we performed, in detail.

III. THE RFP PACKAGE

Q. How did Progress Energy Florida construct the RFP?

A. The RFP Package consisted of three key components. The first part was the Solicitation Document, which outlined PEF's need for generating capacity, the objectives of the RFP, the Company's next-planned generating unit, PEF's system specific conditions, and a schedule of key dates in the RFP process, and it identified myself as the RFP contact. The document also discussed PEF's requirements for submission of bids, and it described the criteria that we would use to compare and evaluate the price and non-price attributes of the proposals.

The second component was the Response Package, which contained a description of the information bidders were to provide in their proposals. It defined the required organizational structure and contents of any submitted proposal and it contained instructions on how to complete the schedules (or forms) provided to the bidders.

The third component consisted of the Schedules (Microsoft Excel worksheets) that bidders were required to use to provide data, including pricing, to PEF. Included in the RFP package were two attachments to the Solicitation Document. The first was a version of the proposed Key Terms and Conditions of a purchased power agreement and the second was PEF's April 2003 Ten-Year Site Plan (TYSP).

Q. How does the RFP you issued for Hines 4 differ from the RFP for Hines 3?

A. There were a number of differences between the two RFPs. Some were as a result of the changes to the Bid Rule, and some were changes we made with the idea of opening up the RFP to get more participants and give more flexibility to potential bidders.

Q. What kind of changes did you make as a result of changes to the Bid Rule?

A. One of the changes was to hold a Pre-Issuance meeting to discuss the requirements of the RFP prior to actually issuing the RFP. In the spirit of discussing the RFP prior to issuing it, we also issued a draft of the RFP, which was not required by the Bid Rule. We included a copy of our latest Ten-Year Site

Plan and we included a section discussing system-specific conditions, both as required by the revised Rule 25-22.082 F.A.C. While we described our evaluation process quite thoroughly in the Hines 3 RFP, we provided even more explanation in the Hines 4 RFP. Finally, we added a discussion about the calculation of the equity adjustment in the Hines 4 RFP because imputed debt is a cost of purchased power and, therefore, we must calculate it, when necessary. In the Hines 3 RFP, we did not apply an equity adjustment in our evaluation because Hines 3 was significantly more cost effective than any other proposal without the adjustment. In this RFP evaluation, as I'll explain later, we did apply the equity adjustment because we said we would in the RFP, even though Hines 4 can be shown to be more cost effective without it.

Q. **What kind of changes did you make to open up the RFP and give potential participants more flexibility?**

A. First, to open up the RFP to more participants, we eliminated the minimum capacity requirement of a proposal (in the Hines 3 RFP, there was a 100 MW minimum). Second, to provide bidders more flexibility, we allowed proposals to have a start date as early as December 1, 2006, a year before Hines 4 is to be placed in service. Third, we allowed bidders to increase the capacity of their proposal after the first year. This change was the direct result of a request from a potential bidder at the Pre-Issuance meeting. Fourth, we shortened the minimum term of the proposal from five years to one year for proposals that did not require a need determination hearing. Finally, we told the bidders we would allow them to propose a fuel tolling arrangement whereby PEF would be responsible for acquiring fuel for the project.

IV. THE EVALUATION METHODOLOGY

Q. Did PEF provide a detailed description of the evaluation process it was going to use?

A. Yes, we did. The Solicitation Document described in detail the seven-step evaluation process we planned to use in the evaluation of the proposals.

Q. Please briefly describe the evaluation process.

A. The process, described in detail in the Solicitation Document itself, is shown in flowchart form in Exhibit ___ (DJR-2). This is the same flowchart that was included in the Solicitation Document. Briefly, the seven steps of the process were:

1) Screening for Threshold Requirements. In this step, the proposals would be reviewed to ensure they met the informational requirements of the RFP. The Threshold Requirements were provided in a table in the Solicitation Document such that the bidders could check to ensure their proposals fulfilled the requirements. Proposals not meeting the Threshold Requirements would be eliminated from further evaluation.
2) Segregation of Bids. In this step, proposals that passed the Threshold Requirements were to be separated into categories distinguished by the type of

bid and term. The purpose of this step was to ensure a consistent and fair evaluation by categorizing "like type" proposals and allowing PEF to identify the best proposals in each category.

3) Economic Evaluation. In this step, the proposals would be screened based on the fixed, variable, and start payments and optimization analyses would be performed. Proposals that were significantly higher in cost compared to other proposals could be eliminated from further evaluation.

4) Technical Evaluation. In this step, proposals that passed the economic screening would be evaluated on a technical basis to assess their feasibility and viability. Proposals were to be reviewed to ensure they conformed to the Minimum Evaluation Requirements (which were different from the Threshold Requirements) and would be evaluated based on established Technical Criteria. Tables in the RFP provided both the Minimum Evaluation Requirements and the Technical Criteria. PEF included a description of each of these non-price attributes, as well as the Company's preferences with regard to the attributes.

5) Selection of Short List. In this step, those bids that were found to be inferior to other bids, based on the Economic and Technical Evaluations, would be eliminated from further consideration.

6) Detailed Evaluation. In this step, proposals that were included on the Short List would be compared to PEF's self-build alternative, Hines Unit 4. Proposals would be subjected to a more detailed assessment, and transmission cost impacts would be incorporated into the analysis. Scenario and sensitivity

analyses would also be conducted, if deemed appropriate based on the proposals submitted.

7) Selection of Final List. In this step, PEF would identify those bidders with which it would begin contract negotiation. In the event that Hines Unit 4 was found to be clearly superior to the short-listed proposals, a final list would not be selected. We also anticipated contract negotiations and an announcement of an Award List, but that was dependent on the results of the evaluation and would not take place if Hines Unit 4 was found to be better than the other proposals.

V. THE RFP PROCESS: PRE-SUBMISSION

Q. Let's go through the RFP process. What was the first step?

A. The RFP process started with our announcement that we were going to be issuing an RFP for generating alternatives. We announced this using several methods, beginning with a notice of the RFP on September 10, 2003. The public notice was published in newspapers of state and national circulation. A press release was also published and referred to in articles by a number of news services, both in print and on-line, including the Electric Power Daily, Energy Info Source, and Morningstar.com.

Q. Did you publish public notices as required by Rule 25-22.082?

A. Yes, we did. We published public notices in newspapers of state and national circulation such as the Lakeland Ledger, Tallahassee Democrat, Miami Herald, Tampa Tribune, St. Petersburg Times, Orlando Sentinel, the (Jacksonville) Florida Times-Union, and the Wall Street Journal on various dates between September 10 and October 1, 2003. The notice provided a general description of the Company's next-planned generating unit, the name and address of the contact person from whom to request an RFP package, the Company's RFP web site address where the RFP package could be obtained, and the schedule of critical dates for the RFP process. Twenty-seven parties that had previously expressed an interest in other RFPs in the State of Florida were sent an electronic copy of the public notice, via e-mail, including the Florida Office of Public Counsel and the staff of the Florida Public Service Commission.

Q. You mentioned the RFP package was available on the RFP web site. When was it first available?

A. Draft versions of the Solicitation Document and the Response Package were available on September 10, 2003. We decided to make drafts of the documents available to potential applicants so a more informed discussion about the RFP could take place at the Pre-Issuance meeting.

Q. What was the Pre-Issuance meeting and when was it held?

A. The Pre-Issuance meeting was held on September 23, 2003 at the Tampa Airport Marriott. Potential participants could also participate in the meeting via conference call. The purpose of the Pre-Issuance meeting was to discuss the requirements of the RFP. The meeting consisted of a presentation covering the objective of the RFP, the types of proposals allowed, the RFP package, the RFP process, and our requirements of bidders. Throughout the presentation, questions were asked, and answers were provided. All questions and answers were later posted on the RFP web site.

Q. Did you make any changes to the RFP based on the Pre-Issuance meeting?

A. Yes, we did. The RFP documents were revised, taking into account questions that were asked and comments that were expressed by the participants at the Pre-Issuance meeting. Clarifications were also made to some of the wording.

Q. When did PEF actually issue the RFP?

A. The RFP package was issued on October 7, 2003 and it was available for downloading from the RFP web site. By December 16, 2003, more than 80 copies of the RFP package had been downloaded.

Q. When did the potential participants get involved in the RFP process?

A. The first major activity for bidders was to submit a Notice of Intent (NOI) to bid. Bidders were asked, but not required, to submit this form by October 14, 2003. Submission of this form would ensure that bidders received all information pertaining to the RFP. NOI forms were received from nine bidders.

Q. Did Progress Energy Florida hold a Bidders' Conference?

A. Yes, we held a Bidders' Conference on October 21, 2003 at the Tampa Airport Marriott. The purpose of the Bidders' Conference was to provide interested parties the opportunity to ask questions and seek additional information or clarification about the solicitation process. I made a brief presentation similar to the one I made at the Pre-Issuance meeting, summarizing the RFP process and the requirements of the RFP. Bidders were encouraged to submit questions ahead of time, and one bidder provided written questions. Those questions were answered first, and then I opened the floor for questions. All questions and the corresponding answers were posted on the RFP web site shortly after the Bidders' Conference. The Q&A section of the web site was updated as additional questions were posed.

Q. When did PEF receive proposals?

A. We received five proposals from four bidders on December 16, 2003. In addition, one bidder provided two variations to its proposal. To simplify the discussion, the variations will be referred to as proposals also; thus, we had a total of seven proposals from four bidders. The Hines 4 self-build team provided details of the Hines 4 project on the same date. The proposals were identified by bidder as Proposal A through Proposal D. Numbers were appended to the letter designation for bidders that provided more than one proposal or variation. Therefore, we had Proposal A, Proposal B, Proposals C1, C2, and C3, and Proposals D1 and D2.

Q. What kinds of proposals did you receive?

A. Four of the seven proposals were New Unit Proposals and two were Existing Unit Proposals. One proposal is best described as a combination Existing/New Unit proposal. The New Unit Proposals involved building new combined cycle units. Two of these proposals involved selling only a portion of the output to Progress Energy Florida. The proposals varied in length from five to 25 years, and all but one would be fueled primarily with natural gas. The start date for all the proposals was December 1, 2007 with the exception of one proposal, which could start as early as December 1, 2006. A summary table of the proposals is provided in Exhibit ___ (DJR-3). Also provided in the exhibit is a list of the names of the bidders, listed in alphabetical order. A more detailed description of the proposals, based on summaries provided by the bidders, can be found in confidential Appendix J of the Need Study.

VI. THE RFP PROCESS: EVALUATION – THRESHOLD SCREENING

Q. What happened next?

A. We began our bid evaluation process. The first step in the process was threshold screening. We evaluated all of the proposals with respect to the Threshold Requirements identified in Table IV-1 of the Solicitation Document and shown in Exhibit ___ (DJR-4). Threshold Requirements represent the minimum requirements that all proposals are required to meet to be evaluated, and with which a Bidder's compliance can be easily assessed. Some examples of Threshold

Requirements are general requirements, such as the proposal being received on time, the submittal fee being included, and the power being available for delivery by December 1, 2007. Others include operating thresholds, such as operating the project to conform to voltage and frequency control requirements and agreement by the bidder to coordinate maintenance scheduling, and having control of the site. Another requirement was that the proposal had to have complete and credible answers provided to all questions.

The threshold screening provided a "sanity check" of the proposals by asking, "Is everything here that we asked for? Do we have everything we need to perform our analyses?" If they didn't pass the threshold screening based on our initial review, we went back to the bidders with questions in an effort to help them resolve the deficiencies in their proposals and to make sure we had everything we needed to conduct a thorough evaluation of the bids.

Q. What were the results of the threshold screening?

A. A summary of the Threshold Requirements and the results of the threshold screening are shown in Exhibit ___ (DJR-5). None of the proposals initially passed the Threshold Requirements screening process without any deficiencies; all of the proposals required at least some clarification.

Proposal D1 was for the capacity of an existing unit that is currently under contract to Progress Energy Florida, which expires at the end of 2008. This proposal provides no new capacity to the Progress Energy Florida system by December 1, 2007 and, thus, does not pass the Threshold Requirement that power must be available for delivery by December 1, 2007. Proposal D1 was therefore eliminated from the RFP process and the submittal fee was returned to Bidder D.

Q. Did PEF contact the bidders and inform them of deficiencies in their proposals?

A. Yes. On January 13, 2004, PEF informed each of the bidders of the various deficiencies in their proposals with respect to the Threshold Requirements. The Company also requested additional clarification from the bidders on portions of their proposal. All of the bidders submitted clarifications and additional information to pass the Threshold Requirement screening.

Q. Did you tell the bidders anything else?

A. Yes, we provided them the cost and operating characteristics of Hines 4.

Q. Why did you do this?

A. Up until this point in time, we had provided cost and operating characteristics associated with our next planned generating unit, which were planning estimates. The information provided about Hines 4 was information provided by the Hines 4 self-build team to the RFP Evaluation Team on December 16, 2003, when all bidders submitted their proposals. We provided this information to the bidders and we provided them the opportunity to revise their bids in accordance with Rule 25-22.082(14) F.A.C. We gave the bidders 10 days to revise their bids.

Q. Did any of the bidders revise their bids?

A. Bidder B was the only bidder to provide revised prices. In addition to providing revised prices, Bidder B also provided PEF the option to increase the proposal term to as many as 10 years (through the end of 2016). We used the new prices in our economic evaluation and we examined the impact of the optional longer term.

VII. THE RFP PROCESS: EVALUATION – ECONOMIC EVALUATION

Q. Please explain the economic evaluation process.

A. There were two parts to the initial economic evaluation process: a screening analysis and an optimization analysis. The screening analysis compared the six remaining proposals to each other in terms of $/kW-year, based on the total prices proposed by the bidders and an assumed capacity factor. The purpose of the initial economic screening was to get a simple perspective of the economics of the proposals compared to each other.

Q. What capacity factor did you assume for your screening analysis?

A. We assumed a capacity factor of 50 percent. This capacity factor was assumed because this was the expected capacity factor for Hines 4 as indicated in the 2003 Ten-Year Site Plan.

Q. What was the result of your analysis?

A. The evaluated costs of all but one of the proposals were within a reasonable range of each other. Exhibit ___ (DJR-6) shows the results. The evaluated costs of Proposal D2 are higher compared to the other proposals. Option C2 looks to be economically superior to the other options proposed by Bidder C.

Q. What was the purpose of the optimization analysis?

A. The purpose of the optimization analysis was to develop an optimal resource plan for each bidder's proposal assuming the proposal as a given. These resource plans would later be used in the detailed economic analysis. The optimization analyses were performed for a period of 30 years to capture all of the costs associated with each alternative, and, in particular, to determine the type of units that make up the optimal resource plan including a bidder's proposal. The supply alternatives that could be selected were generic combustion turbine, combined cycle, and coal units.

Q. Please explain the optimization analysis you performed.

A. The optimization analysis was performed using the PROVIEW optimization model. While the screening analysis compared the proposals to each other based simply on the cost of the proposals in isolation, the optimization analyses assessed the impact of each proposal on total system costs and compared those costs to the costs of a Base Case optimal plan. The impact on total system costs is important because it shows the net impact on the customer of choosing an alternative, including both the project cost and the impact the alternative would have on system operating costs. Such an analysis explicitly examines the relative impacts on system costs for fuel and variable O&M of the other units on PEF's system, and any impact the alternative would have on PEF's purchased power costs.

Q. What was in the Base Case, and why did you compare the alternatives to it?

A. The Base Case was an optimal resource plan assuming only generic combustion turbine, combined cycle and coal units; in other words, Hines 4 was not included in the resource plan. This ensures that all alternatives, including Hines 4, would be treated in the same manner and compared to a common reference point.

Q. Where do you get the assumptions for generic unit costs and operating characteristics?

A. We develop our generic cost and operating characteristics using the Electric Power Research Institute (EPRI) Technical Assessment Guide (TAG) software. EPRI gathers information about generating technologies, such as construction cost, O&M costs, and heat rates, and the software allows us to take the data and apply adjustments to adapt the information such that it is appropriate for the Southeastern United States. While the data is appropriate for a region, they are not site-specific. Therefore, they do not take into consideration costs or conditions that might be particular to a given site.

Q. Why do you use EPRI data?

A. We use the EPRI TAG data because it ensures the information is unbiased and developed for different technologies using a consistent methodology.

Q. How does the generic EPRI data compare to Hines 4?

A. The generic data are very good estimates of the cost and performance characteristics of the technologies. They are planning estimates, however, and are not meant to be "budget quality" estimates. In general, they are conservative estimates. In other words, the costs are higher, and the performance is less efficient. For example, the construction cost of Hines 4 is estimated to be $221.5 million; the generic combined cycle cost estimate for a 2007 in-service date is $233.7 million. The fixed O&M costs for Hines 4 are estimated to be $1.29/kW-year and $2.64/kW-year for the generic combined cycle. The reason for the big difference in fixed O&M is Hines 4 is being built at an existing site; whereas, the generic combined cycle is assumed to be at a new site. Hines 4 will be able to take advantage of the existing operating personnel, allowing us to add fewer new workers than what would be required at a new plant.

Q. Please explain what the PROVIEW model is and what it does.

A. As I mentioned before, PROVIEW is an optimization model, which we use to develop optimal resource plans, where the objective function is to minimize the cumulative present worth of revenue requirements for the PEF generation system, subject to the 20 percent Reserve Margin constraint. Thus for each bidder's proposal, PROVIEW provides us the optimal generation expansion plan for the 30-year study period, if we selected the bidder's proposed resource.

Inputs to the model include the load and energy forecast and the costs and characteristics (such as heat rates, outage rates, and maintenance requirements) of the existing generating units and purchase power agreements. A user also provides costs and operating characteristics of potential future supply-side resources, which could be generating units or purchases.

With these descriptions of the demand and existing and future resources, PROVIEW develops alternative resource plans to meet the projected future customer requirements using all possible combinations of resources, and it calculates the cumulative present worth of revenue requirements for each combination. The model then sorts each alternative plan from lowest to highest cost. From an economics-only perspective, the lowest cost plan is the optimal plan.

Q. What were the results of the optimization analyses?

A. Exhibit ___ (DJR-7) shows the economic results of these optimization analyses. The exhibit shows the difference in total system cumulative present worth of revenue requirements associated with each alternative compared to the Base Case. The analysis shows that a resource plan built around Proposal C2 would have the lowest future cost for the PEF customers of any of the responses we received from bidders to the RFP.

We examined two alternative proposals from Bidder B: an alternative ending at the end of 2011 and an alternative ending at the end of 2016. The optimization analysis shows the five-year alternative to have lower costs than the 10-year alternative. Therefore, the detailed evaluation considered only the five-year proposal from Bidder B.

The analysis also shows option C2 to be the lowest cost alternative from Bidder C. Thus, the detailed evaluation considered only option C2 from the three options proposed by Bidder C.

Because Proposals A and D2 were both less than the approximate 500 MW supply being requested in the RFP, we looked at the impact of combining the two proposals. The analysis shows that the combination of Proposals A and D2 would be more expensive than either proposal on its own, but slightly less than the cost of the two proposals summed together.

For comparison purposes, the figure also shows the costs associated with an optimal resource plan based on the addition of Hines 4. This analysis shows Hines 4 to be approximately $48 million less expensive than the least-cost proposal from Bidder C.

VIII. RFP PROCESS: EVALUATION – TECHNICAL EVALUATION

Methodology

Q. What was the purpose of the Technical Evaluation?

A. The purpose of the Technical Evaluation was to assess the non-price attributes of the proposals by evaluating the quality of the proposals from a technical perspective. There were two parts to the Technical Evaluation—one, the Minimum Evaluation Requirements and two, the Technical Criteria. (Note that these are different than the Threshold Requirements, discussed earlier in my testimony, which were designed to ensure that proposals contained all the information we needed to evaluate the proposals and that the proposals addressed the basic requirements of the RFP.) We used the Technical Evaluation to help us get to the Short List by ensuring that all the proposals that went to the Short List were technically viable.

Q. Briefly, what were the Minimum Evaluation Requirements?

A. The Minimum Evaluation Requirements (MERs), which were provided in the RFP and are shown in Exhibit ___ (DJR-8), were the technical "must have" elements of a proposal. They were the components, or characteristics, the proposals had to have to move forward in the process. If a proposal did not meet one of the MERs, it would not make the Short List.

Q. How were proposals evaluated on the MERs?

A. Each proposal was evaluated on each requirement on a "Go" / "No Go" basis.

Q. Briefly, what were the Technical Criteria?

A. The Technical Criteria were characteristics (non-price attributes) we wanted proposals to have, and that would make a proposal more attractive to us. The criteria fell into three categories: operational quality, development feasibility, and project value, as summarized in Exhibit ___ (DJR-9). While the Minimum Evaluation Requirements are the "musts," the Technical Criteria are the "wants." We didn't necessarily envision that the Technical Criteria would eliminate anyone unless, of course, a proposal consistently ranked at the bottom of the pack. If a proposal didn't have something we wanted or, perhaps, it had what we wanted but not to the quality we desired, we would ask the bidder about it, to see if they would be willing to improve their proposal in that respect.

Q. How were proposals evaluated on the Technical Criteria?

A. Each proposal was assessed on each criterion, and the proposals were ranked relative to the other proposals. In this ranking system, "one" is considered the best. This method of ranking the alternatives allowed us to see if any of the proposals were significantly better or worse than any of the rest, based on the Technical Criteria.

Q. Who evaluated the proposals in the Technical Evaluation?

A. We established separate teams staffed with personnel with expertise in the areas of development and construction, engineering (operations), environmental, financial viability, fuel, key terms and conditions, and transmission to review the proposals. Each of the teams received the executive summaries of the proposals and only those portions of the proposals that dealt with its area of expertise. The technical experts were instructed, to the greatest extent possible, to disregard anything they knew about the Hines Energy Complex. Only the economic evaluation team had access to the pricing proposals, since the other technical evaluators did not need to know the pricing proposals to perform the evaluation of the proposals on their technical merits. Thus, the technical evaluations were performed blind to the economics of the proposals. This was done to make the Technical Evaluation as impartial as possible.

<u>Minimum Evaluation Requirements</u>

Q. Please explain the Minimum Evaluation Requirements in more detail. What were they, and why were they important?

A. There were eight MERs in five different categories: Environmental, Engineering and Design, Fuel Supply and Transportation Plan, Project Financial Viability, and Project Management Plan, as shown in Exhibit ___ (DJR-8). The MERs are what PEF feels are the most important non-price attributes of supply alternatives.

The two requirements in the environmental category, that a preliminary environmental analysis had been performed and that a reasonable schedule for securing permits be presented to PEF, applied only to New Unit Proposals. The purpose of these requirements was to ensure, to the greatest extent possible, the proposed project could obtain the necessary environmental permits.

There were also two requirements in the engineering and design category. The purpose of the requirements in this category was to determine if the proposed technology was viable from an engineering and operations perspective. To pass the requirements in this category, bidders had to provide an operation and maintenance plan indicating the project would be operated and maintained in a manner to allow the project to satisfy its contractual commitments, and bidders had to demonstrate the project technology would be able to achieve its operating targets.

For the fuel supply and transportation plan category, bidders of New Unit Proposals had to provide a preliminary fuel supply plan that described the bidder's plan for securing fuel supply and transportation for delivery to the project. Alternatively, as a feature in our RFP, bidders had the option to propose a fuel tolling arrangement whereby PEF would be responsible for acquiring fuel for the proposed project. All of the bidders proposed tolling arrangements. Since PEF has experience acquiring the types of fuels required by the projects, all of the proposals passed this requirement.

The purpose of the project financial viability MER was to ensure the bidder had the financial backing to construct and operate the project through the term of the proposal. For New Unit Proposals, evidence had to be provided that demonstrated the project would be financially viable. All proposals had to demonstrate that the bidder would have sufficient credit standing and financial resources to satisfy its contractual commitments.

The final component for the Minimum Evaluation Requirements applied to New Unit Proposals only. Bidders of that type had to submit a construction management plan to show that the project could be built in time to serve PEF's need.

Q. How were the proposals evaluated with respect to the Minimum Evaluation Criteria?

A. As I mentioned before, the proposals were judged on a "Go"-"No Go" (or Pass-Fail) basis. As discussed in the RFP Solicitation Document, failure to demonstrate conformance with the MERs would be grounds for elimination from the process. Failing to meet a minimum requirement should result in the elimination of a proposal because it doesn't meet a minimum standard for a good project—one that PEF feels has a high probability of being able to get the necessary permits, approvals, financing, etc. to enable the project to be built in time to serve the needs of the PEF customers and one that will continue to be able to serve the customers over the term of the proposed contract.

For most of the requirements, the proposals were reviewed to see if they had the documents, schedules, or plans as I discussed above. For example, the project management plan required the bidders to provide a critical path diagram and schedule for the project that specified the items on the critical path and demonstrated that the project would achieve commercial operation by December 1, 2007. For requirements such as this, they either provided the information (and it was judged as acceptable), in which case they would pass; or they didn't provide the information (or it was deemed unacceptable), in which case they would fail. The evaluation teams used their years of knowledge and technical expertise to determine if the information provided was valid.

Q. Did all of the six remaining proposals pass the Minimum Evaluation Requirements?

A. Yes, they did.

Evaluation of Technical Criteria

Q. Please explain the results of the second part of the Technical Evaluation, the evaluation of the proposals with respect to the Technical Criteria, in more detail.

A. With respect to the Technical Criteria, the proposals were ranked relative to each other for each of the criterion. The proposals were evaluated in terms of 15 technical criteria in three major areas: (1) development feasibility, (2) project value, and (3) operational quality. The evaluation criteria contained within these areas were identified in the Solicitation Document, and are included here as Exhibit ___ (DJR-9). The Solicitation Document also discussed the purpose of each criterion and PEF's preferences.

Q. Please explain the factors you considered in development feasibility.

A. This area of evaluation was our judgment of the bidder's ability to bring the proposed unit on-line on time. We assessed the developer's plan to obtain the necessary land use and environmental permits, including a water supply, for the proposed project.

Another aspect of project feasibility is the developer's financial viability. We focused on the developer's financial capability and credit. If the bidder was proposing to obtain project financing for its proposal, we would focus on the financial viability of the proposal. If the bidder indicated it would be providing equity to the project or would be self-financing the project, we would also assess the bidder's ability to provide the required equity or financing.

We also evaluated the likelihood of the project coming on line on time by evaluating the developer's planned permitting, licensing, and construction milestone schedules.

Finally we considered the bidder's experience in successfully developing and operating a project of the magnitude proposed.

Q. Please explain the factors you considered in project value.

A. We examined four factors that fall within this category:

- Acceptance of key terms and conditions;
- Fuel supply and transportation reliability;
- Reliability assessment;
- Flexibility provisions.

These are all factors that will ultimately affect the cost and flexibility of the project that we wanted to consider to see if one project provided a clearly better deal.

Q. What key terms and conditions are you referring to in the project value category?

A. The Solicitation Document included a set of terms and conditions of a power purchase agreement that would be critical to PEF. Bidders were instructed to mark the terms and conditions for any changes that they would like to make. We then evaluated the proposals on the extent to which the proposed deal was contingent on changing the key terms and conditions. The terms and conditions are too numerous to detail in my testimony but they cover subjects one would customarily expect to see addressed in a power purchase agreement, and, as I mentioned, they were provided to the bidders as an integral part of the RFP.

Q. Didn't you evaluate fuel supply and transportation as part of the Minimum Evaluation Requirements?

A. Yes, we did. As I mentioned before, the MER was that the bidders were to provide us a preliminary fuel supply plan; instead, all the bidders proposed fuel tolling arrangements. Here, we ranked the proposals based on the location of the plant and whether it was in the Southwest Fuel Group; whether the plant was connected through a local distribution company (LDC); whether a backup fuel was available; and how much backup fuel storage was available.

Q. How did you evaluate the contractual flexibility of each proposal?

A. In the RFP Solicitation Document, PEF reserved the right to consider any unique flexibility provisions offered by a bidder that were not going to be considered elsewhere, such as in the economic evaluation. Examples typically include contract options such as buyout provisions, or options to extend the contract, among others. However, none of the bidders offered any unique contract flexibility provisions. Bidder B offered options regarding contract term and Bidder C offered pricing and plant configuration options; however, these alternatives were captured in the economic evaluation process. Thus, the proposals were not ranked for the contractual flexibility criterion.

Q. What did you examine in your reliability assessment?

A. Here we considered the guarantee the bidder offered for the availability of the unit; that is, what percentage of time the bidder would guarantee that the unit would be available if we called on it. Specifically we did this by ranking the bidders based on the equivalent forced outage rate (EFOR) they offered to guarantee.

Q. Please explain the operational quality factors you considered as part of the Technical Evaluation.

A. The criteria that were evaluated in this area included:

- Minimum load;
- Start time;
- Ramp rate;

- Maximum starts per year;
- Minimum run-time constraint;
- Minimum down-time constraint;
- Annual operating hours limit.

In general, these attributes measure the flexibility of the proposed unit to operate in ways that respond to changes in demand. Thus, we evaluated the proposals with respect to how long it would take to get the proposed unit started, how long it would take to get the unit up to the desired output level, the number of times in a year the unit could be started and stopped, the minimum amount of time the unit would have to run once it was started, the amount of time the unit had to be off-line once it was shut down, and the number of hours in a year the unit could operate.

Q. What were the results of your Technical Evaluation?

A. The Technical Evaluation of the proposals uncovered some minor issues that needed further clarification from all of the bidders, and which they provided. Overall, the Technical Evaluation results were mixed—no proposal was clearly the best proposal for all of the criteria, although the quality of each of the proposals was acceptable.

IX. THE RFP PROCESS: SELECTION OF SHORT LIST

Q. So far, you have explained the Threshold Screening analysis, the initial economic analysis, and the Technical Evaluation. Were you then ready to announce your Short List?

A. Yes, we were. From the technical perspective, the six remaining proposals met the minimum evaluation criteria, and none of the six proposals appeared to be technically deficient to the extent they should be eliminated from the RFP. Based on the results of the economic screening and optimization analyses, however, it may have been possible to eliminate one or more of the proposals. Because of the limited number of bidders remaining after the threshold screening, the Company decided not to eliminate any bidder at this point in the evaluation process. We did, however, reduce the number of proposals to one from each bidder, keeping the 5-year proposal from Bidder B and Proposal C2 from Bidder C, as well as Proposal A and Proposal D2.

Q. When did you notify the short-listed bidders of this decision?

A. All of the bidders were notified on March 5, 2004 that they would be placed on the Short List.

Q. Did you tell the short-listed bidders anything else?

A. The bidders were also provided with a list of questions for clarification or additional information derived from the technical evaluation of their proposals. The bidders were given 10 days to provide answers to the questions. At the same time, we informed the bidders that PEF was revising the cost and operating characteristics for Hines Unit 4 and that each of them could submit a revised bid. Thus, each bidder on the Short List had an opportunity to beat the final cost estimate of PEF's self-build option, as required in Rule 25-22.082 (14) F.A.C. In fact, this was the second opportunity we provided the bidders to enhance their proposals.

Q. Why did you revise the cost and operating characteristics of Hines 4 a second time?

A. In analyses performed for the April 2004 Ten-Year Site Plan, Hines 4 was projected to run more than the 50% indicated in the RFP (which was based on the 2003 TYSP). The current analysis projected an annual average capacity factor of 67% over the life of the unit. This revision to the estimated capacity factor reduced the major maintenance costs from \$2.71/MWh to \$2.02/MWh (the major maintenance costs in dollars remained the same but the amount of energy in the denominator increased). The estimated cost of natural gas for Hines 4 in 2007 was reduced from \$4.69/mmBtu to \$4.64/mmBtu, and the estimated pipeline reservation cost was reduced from \$0.76/mmBtu to \$0.66/mmBtu, both reflecting the difference in cost of using a different pipeline to deliver the gas for Hines 4 (from FGT to Gulfstream).

Q. Did any of the bidders revise their prices?

A. Yes, Bidder B lowered its prices. We used the new prices in our detailed analyses.

X. THE RFP PROCESS: EVALUATION – DETAILED EVALUATION

Methodology

Q. Please describe the Detailed Evaluation analysis performed and the results of the analysis.

A. The purpose of the detailed evaluation was to subject the proposals on the Short List to a more detailed assessment and compare them to PEF's self-build alternative, Hines 4, incorporating transmission cost impacts based on system impact studies. The detailed evaluation was performed using the most up-to-date information supplied by the bidders on the Short List.

Q. What were the tasks involved in the detailed evaluation?

A. There were three main tasks: finalizing the Technical Evaluation, evaluating the transmission impacts of the proposed plants, and conducting the detailed economic analysis, which included detailed production costing and financial analyses.

Finalized Technical Evaluation

Q. What did you do to finalize the Technical Evaluation?

A. The Technical Evaluation of the proposals was updated based on the responses from the short-listed bidders to the requests for clarification and additional information. The Technical Evaluation of the short-listed proposals revealed no "show-stoppers." However, the ranking of the proposals on some of the criteria did change.

We also performed a self-assessment of Hines 4, and ranked it among the proposals. As can be seen in the final results, shown in Exhibit ___ (DJR-10), Hines 4 ranked either first or second among the alternatives for many of the criteria. An evaluation of Hines 4 determined that it, like the short-listed proposals, would provide satisfactory operational quality. Because the Hines site was originally approved for 3,000 MW of generation and because environmental issues pertaining to development beyond Unit 1 were considered during the original certification, many environmental initiatives are underway or already completed. Thus, from an environmental perspective, the Hines site ranks highest among the New Unit alternatives. Compared to the other bidders on financial viability, PEF was ranked first. Relative to all of the alternatives, Hines 4 compares favorably on fuel supply and transportation reliability because of existing connections with two major pipelines. The Hines 4 unit is considered to have "good" reliability, similar to that of Proposal C and better than Proposals A and B.

Transmission Analysis

Q. Please describe the evaluation of the transmission impacts.

A. Bidders of New Unit Proposals were required to provide as part of their RFP Response Package detailed information regarding their proposed power plants to enable Progress Energy Florida to perform transmission system impact studies.

The same type of studies were performed on the proposals as are performed when an independent power plant developer submits a generation interconnection service request to Progress Energy Florida through FLOASIS. These studies included load flow, stability, and short circuit analyses and are necessary to determine the impacts on the transmission system of building the proposed power plants at the proposed sites or of transferring power into the PEF System. These analyses and their findings are discussed in detail in the testimony of Mr. Alfred G. McNeill.

Q. Would any of the proposals require changes to the transmission system?

A. Yes. Proposals A, B (5-yr), and C2 all required changes to the transmission system. The total construction cost of the transmission modifications for Proposal A was estimated to be $51 million (2004 dollars) and would take 84 months to complete. The total construction cost of the transmission modifications on the PEF transmission system required for Proposal B (5-yr) was estimated to be $68 million (2004 dollars) and would also take 84 months to complete. As mentioned in Mr. McNeill's testimony, no cost or time estimates were developed to address the potential problems caused by Proposal B (5-yr) on other systems.

For both Proposals A and B (5 yr), an 84-month construction time would mean the transmission work would not be completed before the beginning of the proposed purchases. In the case of Proposal B (5 yr), the transmission work would not be completed until near the end, or perhaps even after, the term of the proposal. While this puts the feasibility of the purchases in question, the proposals were not eliminated at this point.

The construction cost for the transmission system modifications for Proposal C2 was estimated to be $11 million (2004 dollars) and would take 43 months to complete. Due to the small capacity increase and the nature of the facilities in Proposal D2, PEF determined that a detailed study was not required. For Hines 4, the total construction cost was estimated to be $33.4 million (nominal dollars), with the construction work being completed prior to the in-service date of the unit. All of the cost estimates mentioned exclude AFUDC.

Detailed Economic Analysis

Q. Please describe the detailed economic analysis of the proposals you performed.

A. Detailed economic analyses were performed on all of the short-listed proposals and Hines 4. In the detailed economic analysis, we calculated the incremental system revenue requirements associated with each alternative.

The first step in the detailed economic analysis was to perform detailed production costing analyses of the alternatives. Progress Energy Florida used the PROSYM production costing model to perform the analyses. PROSYM is a detailed, chronological production costing model that simulates each generating resource on the Progress Energy Florida system, both existing and future, and how it is used to serve the forecasted peak demand and energy requirements of Progress Energy Florida's customers.

Each alternative (i.e., the proposals and Hines 4) was modeled as a separate "case," which included the alternative and the future units as determined during the optimization analysis. Just as in the initial economic analysis, we also modeled a "Base Case." In order to treat all alternatives the same in the economic analysis, all cases were compared to the Base Case. The cases were run through the end of 2032, capturing the entire 25-year book life of a combined-cycle unit placed in service by December 1, 2007.

Q. How were the results of the production costing analysis used?

A. The results of the production costing analyses were incorporated into the financial analysis of each alternative. In addition to the production costs associated with each alternative (that is, the energy charges of each proposal and the operating costs of Hines 4), the change in system production costs as a result of each alternative, relative to the base case, was also a part of the financial analysis. The analysis must capture these costs because each alternative, due to its size, heat rate, proposed pricing, etc., causes the other resources of the PEF generation system to operate in a different manner, resulting in different total system production costs.

Q. Were any other cost impacts included in the analysis?

A. Yes. The fixed costs of the alternatives (that is, the fixed charges of the proposals and the construction costs and fixed O&M costs of Hines 4) were captured in the financial analysis. As mentioned before, each alternative was compared to a Base

Case that consisted only of generic future additions; thus, the fixed cost impact of changes to the base case resource plan had to be reflected in the analysis of the alternatives.

The cost impacts of the changes in the resource plan were reflected in the financial analysis by way of an economic carrying charge, which is the same concept as the Value of Deferral used to determine standard offer rates. Because the proposals had different contract lengths, using an economic carrying charge allows each of the alternatives to be evaluated consistently and eliminates problems associated with "end effects." Each alternative received a credit for fixed cost savings equal to the economic carrying charge of a planned unit being deferred in the Base Case. In cases where a planned unit was advanced in the resource plan, the alternative received a cost equal to the economic carrying charge of the unit being advanced. The economic carrying charge captured both the construction costs and fixed O&M costs of the generic units.

The transmission construction costs to integrate each of the proposals and Hines 4 into the transmission system were included in the detailed economic analysis. The annual cash flow pattern of the construction costs was based on expenditure patterns typically experienced for transmission lines and transformers, with one exception. For both Proposal A and Proposal B (5-yr), even though the estimated time to construct the required facilities is 84 months and, therefore, beyond the start of the proposed purchases, the projects were assumed to be completed prior to the beginning of the terms of the purchases and, therefore, the cash flow patterns were compressed to fit the available time.

Finally, we also included the cost of imputed debt by determining the additional equity cost related to the purchased power proposal.

Q. Why did you include the cost of imputed debt in your analysis?

A. The cost of imputed debt was applied to proposals to assure that the total costs of proposals include the marginal impact of the fixed future commitment on PEF's capital structure. This additional cost is the direct result of incurring fixed future payment obligations. Rating agencies make these adjustments to a utility's balance sheet to reflect the existence of debt-like commitments. Also, Rule 25-22.081(7) F.A.C. requires a utility to include a discussion of the potential for increases or decreases in its cost of capital should a purchase power agreement with a nonutility generator be made. The cost of imputed debt quantifies that potential. Mr. Greg Beuris discusses the need for this adjustment more fully in his testimony.

Q. What were the results of the detailed economic analysis?

A. In terms of cumulative present value of revenue requirements (CPVRR), Hines 4 was found to be approximately $55 million less expensive than the least cost alternative (Proposal D2). Hines 4 was found to be more than $95 million less expensive than the least cost New Unit Proposal (Proposal C2). The charts in Exhibit ___ (DJR-1) show the results of the analysis. The top chart shows the difference in the total CPVRR associated with each alternative compared to the base case. The bottom chart shows the results on an annual basis. The results of the detailed financial analysis of the proposals and Hines 4 demonstrate that Hines 4 is clearly the most cost-effective alternative for supplying generation to meet the needs of the Progress Energy Florida customer.

Q. What caused Hines 4 to be less expensive than the other alternatives?

A. One reason is the generation costs of Hines 4 are less than the proposals. Exhibit ___ (DJR-11) shows Hines 4 to be $35 million less expensive than the Base Case's generation costs, while all the other proposals are more expensive than the Base Case when looking at only the generation costs. When looking at only the generation portion of the total costs, Hines 4 is approximately $53 million less than any other alternative. Compared to Proposal C2, the closest proposal in terms of generation-only costs, Hines 4 has higher net energy costs (the energy costs of the plant less the avoided energy costs resulting from adding the plant) than Proposal C2. Proposal C2 has lower net energy costs primarily because it is a larger unit and, when power is generated from the duct burners and power augmentation portions of the plant, it displaces less efficient generating units on the PEF system. However, Hines 4 has even lower net fixed costs (fixed costs of the plant less the avoided capacity costs resulting from adding the plant). Relative to Proposal C2, Hines 4's lower fixed costs are due largely to its lower O&M costs (due to having to hire only six additional people rather than having to hire staff for an entire plant) and because of the common site facilities at the Hines Energy Complex that Proposal C2 would have to build (such as roads, a cooling pond or cooling towers, buildings, etc.). Finally, PEF has a better credit rating that the other bidders, giving Hines 4 a financial advantage.

Hines 4 also has an advantage over the other proposals because of the additional equity costs associated with purchased power agreements. The costs associated with imputed debt are small for three out of the four proposals. The additional equity costs for Proposal C2 are larger than the other proposals because the term of the proposal was longer than the other proposals and the capacity of the project was greater than that of the other proposals.

With respect to transmission costs, Hines 4 is more costly than Proposals C2 and D2, but less expensive than Proposals A and B (5-yr). Keep in mind that even though we show costs for Proposals A and B (5-yr), it is highly unlikely the transmission work would be able to be completed prior to the start of the proposed purchases.

<u>Sensitivity Analyses</u>

Q. Did you perform any sensitivity analyses?

A. Yes, we performed three sensitivity analyses in an effort to make the third-party proposals appear more economically beneficial. One of the analyses was performed on Proposal B (5-yr) and the others were performed on the costs of Hines 4.

Q. Please explain the analysis performed on Bidder B's proposal.

A. All of the bidders desired to have Progress Energy Florida provide fuel tolling services for the project. All of the proposals except Proposal B (5-yr) are natural gas fired combined-cycle units; Proposal B (5-yr) burns No. 6 oil. While fuel prices typically move in parallel, there have been periods in time when this has not been the case, and one fuel becomes relatively cheaper than another. The sensitivity analysis performed on Proposal B (5-yr) was to determine the impact of a lower fuel price for No. 6 oil. The prices used in the sensitivity analysis were between 25 cents/mmBtu and 40 cents/mmBtu lower during the term of Proposal B (5-yr) than the original price forecast. In this sensitivity analysis, the value of Proposal B (5-yr) improved by approximately $20 million. While this reduced the generation component of costs by around 35%, Proposal B (5-yr) is still more expensive than all other proposals.

Q. Did you perform any sensitivity analyses on Hines 4?

A. Yes, we did. We performed sensitivity analyses on both the construction costs and the O&M costs of Hines 4.

Q. Please explain the analyses and the results.

A. Two sensitivity analyses were performed on the costs of Hines 4. Both analyses used the goal seek function of Excel to determine how much higher the construction costs and the O&M costs of Hines 4 would have to be such that it had the same revenue requirements as the next best alternative; in other words, to increase the cost of the self-build alternative by $55 million in cumulative present value of revenue requirements.

To eliminate the $55 million cost advantage that Hines 4 has over the next best alternative, the total installed costs of Hines 4 (including AFUDC) would have to increase more than $47 million, or approximately 19 percent. The O&M costs would have to increase by over $6.5 million per year over the 25-year life of the unit to equate to a $55 million CPVRR cost increase. This compares to Hines 4's expected annual average O&M cost of less than $11 million, and would represent a 59% increase in annual average O&M costs.

Q. Did this complete your economic analysis of the proposals?

A. Yes, it did.

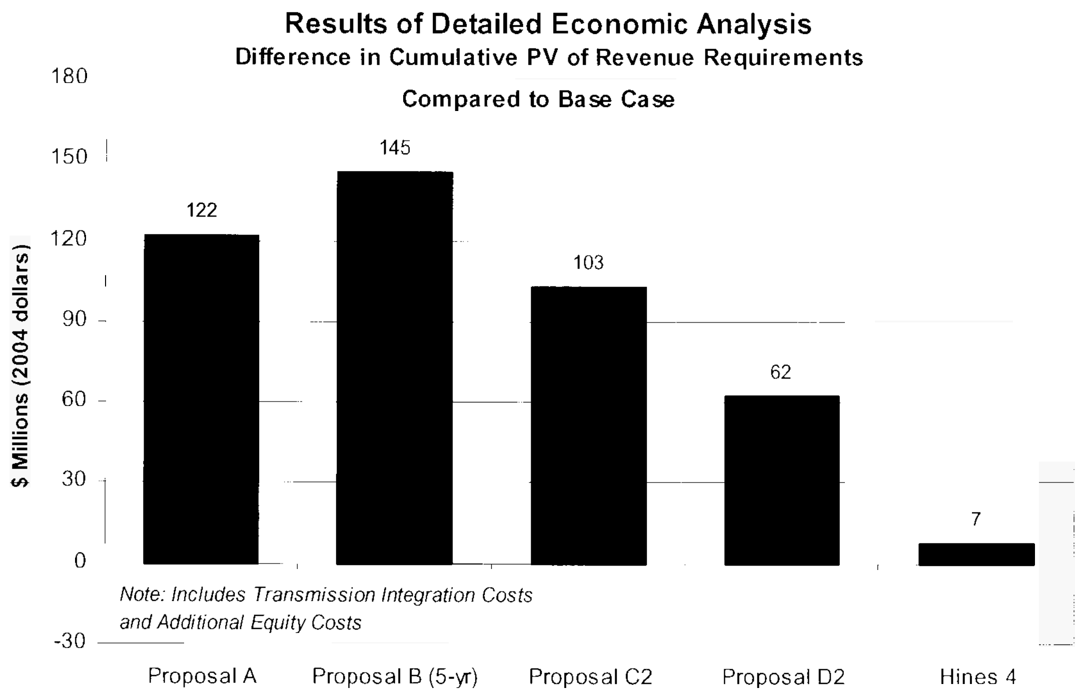
XI. THE RFP PROCESS: SELECTION OF FINAL LIST

Q. What was the final step in the PEF RFP process?

A. The seventh and final step in the process was to select the Final List. However, as discussed previously and as stated in the RFP, in the event Hines 4 was found to be clearly superior to the other alternatives, a Final List would not be selected. Based on the results of the detailed analysis, Hines 4 was found to be clearly superior to the other alternatives. Thus, Progress Energy Florida announced on April 27, 2004 that Hines 4 was the most cost-effective alternative for adding electric generation to serve its customers' needs. This announcement concluded the RFP process.

Q. Does this conclude your testimony?

A. Yes, it does.


Results of Detailed Economic Analysis
Difference in Cumulative PV of Revenue Requirements
Compared to Base Case
$ Millions (2004 dollars)
180
150
120
90
60
30
0
-30
122
145
103
62
7
Note: Includes Transmission Integration Costs
and Additional Equity Costs
Proposal A
Proposal B (5-yr)
Proposal C2
Proposal D2
Hines 4

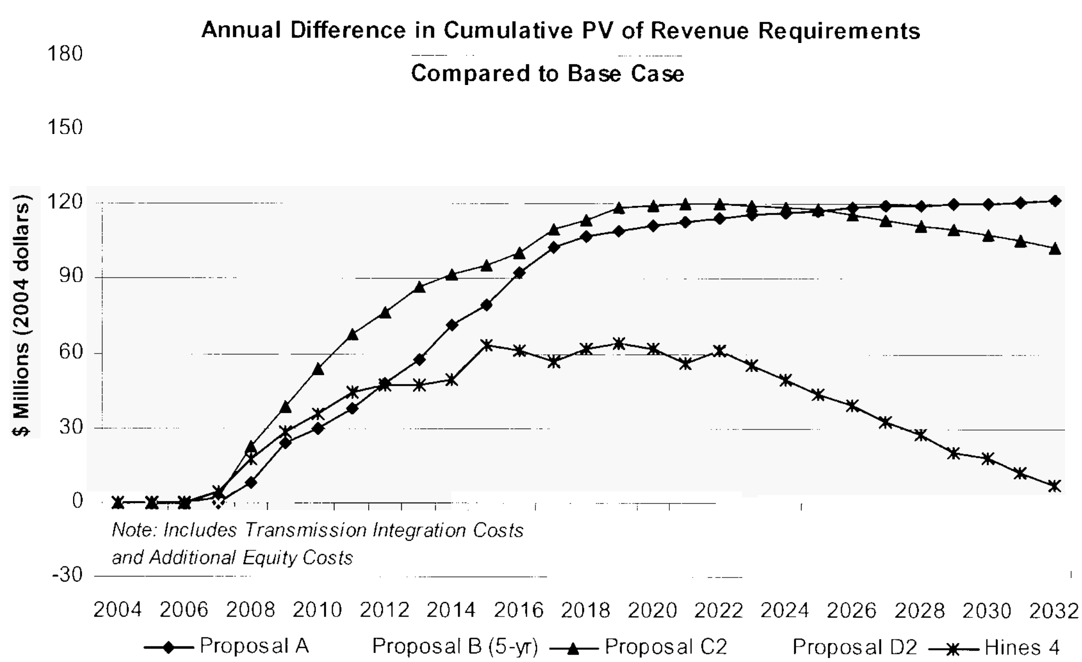

Annual Difference in Cumulative PV of Revenue Requirements
Compared to Base Case
$ Millions (2004 dollars)
180
150
120
90
60
30
0
-30
Note: Includes Transmission Integration Costs
and Additional Equity Costs
2004 2006 2008 2010 2012 2014 2016 2018 2020 2022 2024 2026 2028 2030 2032
Proposal A
Proposal B (5-yr)
Proposal C2
Proposal D2
Hines 4

Exhibit ___ **(DJR-2)**

RFP Evaluation Process

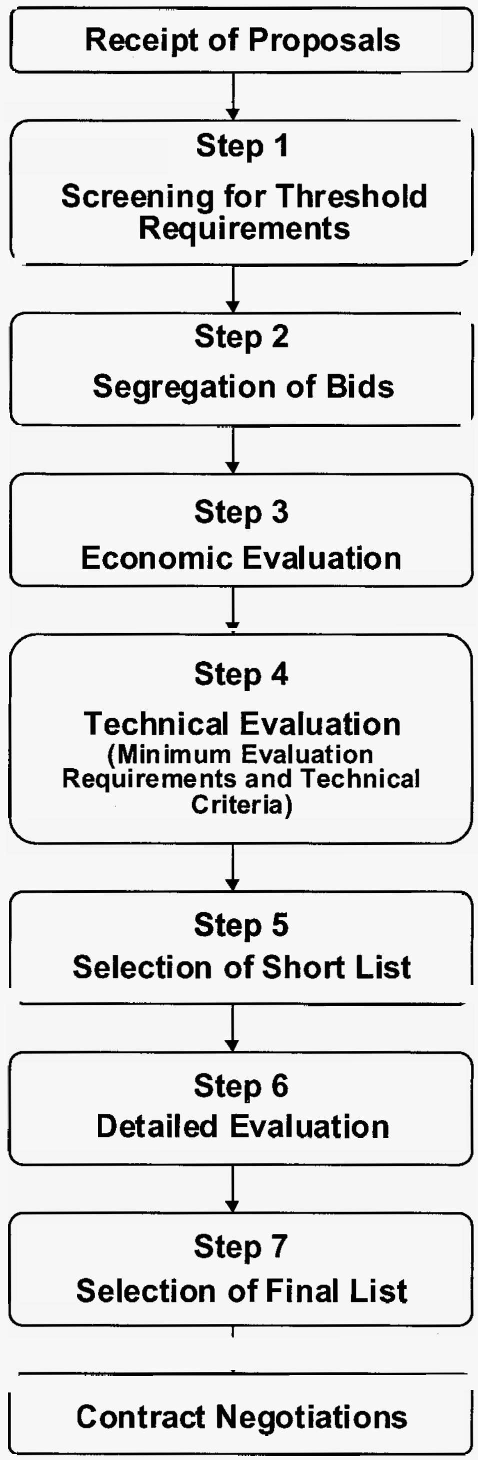


Exhibit ___ **(DJR-3)**

Summary of Proposals

Proposal	Location (County)	Winter Capacity (MW)	Proposal Type	Term (yrs)	Technology	Primary Fuel
A	Indian River	252	New Unit	10	Combined-cycle	Natural gas
B	Brevard	571-582	Existing Unit	5–10*	Fossil steam	No. 6 oil
C1	Orange	515	New Unit	25	Combined-cycle	Natural gas
C2	Orange	632	New Unit	25	Combined-cycle	Natural gas
C3	Orange	514	New Unit	25	Combined-cycle	Natural gas
D1	Pasco	111	Existing Unit	15	Combined-cycle	Natural gas
D2	Pasco	13-124	Existing/New	15	Combined-cycle	Natural gas

* Note: All proposals started December, 2007 except Proposal B, which started December, 2006

List of Bidders

Calpine
Pasco Cogen
Reliant Energy
Southern Power

Threshold Requirements

A. General Requirements

- The proposal is received on time.
- The offer is reasonable and bona fide.
- Complete and credible answers are provided to all questions.
- The proposal submittal fee is included.
- The pricing schedules are properly specified.
- The proper price indices are used.
- Power must be available for delivery under the contract by December 1, 2007.
- The proposed term is for a minimum of one (1) year if the project does not require a Need Determination and 10 years if a Need Determination is required. The proposed term is less than the maximum of 25 years.
- For New Unit Proposals located in Florida, the output of the unit(s) is sufficiently committed to Progress Energy Florida (or other utilities serving retail customers).

B. Operating Performance Thresholds

- If the project is located in PEF's control area, the Bidder will be required:
  - to operate the project to conform with PEF's ***Voltage Control*** requirements.
  - to operate the project to conform with PEF's ***Frequency Control*** requirements.
- New and Existing Unit Proposals must be ***Fully Dispatchable*** and install ***Automatic Generator Control*** that is tied into PEF's Energy Control Center.
- The Bidder must be willing to ***coordinate the project's maintenance scheduling*** with PEF.
- Proposals should have a project size less than or equal to approximately 500 MW.
- System Power Proposals must be ***Fully Schedulable*** (i.e., operate according to a day-ahead schedule but with schedule changes subject to normal utility practices).

C. Contractual Thresholds

- Bidders must agree to each of the Key Terms and Conditions identified in Attachment A

  - OR -
- If Bidder has any objections to the Key Terms and Conditions, the Bidder must:
  - Identify the language which is objectionable;
  - Provide revised language.

D. Site Control Thresholds [New and Existing Unit Proposals]

- Identification of the site location on a USGS map.
- At a minimum, a Letter of Intent to negotiate a lease for the full contract term or term necessary for financing (whichever is greater), or to purchase the site **[New Unit Proposals]**. A copy of the title and legal description of the property is required for **Existing Unit Proposals**.

E. Transmission Threshold

- If the project is located outside of PEF's control area, the Bidder must provide a transmission plan for wheeling services from those utilities which would be required to wheel the project's power to PEF and provide evidence that the host utility is willing to grant PEF the right to dispatch the output of New and Existing Unit Proposals or the right to schedule power from System Power Proposals.
- If the project is located inside of PEF's control area, the Bidder must complete a Network Resource System Impact Study data request (Schedule 7 of the Response Package).

Exhibit ___ **(DJR-5)**

Results of Threshold Screening

Meets Requirements?

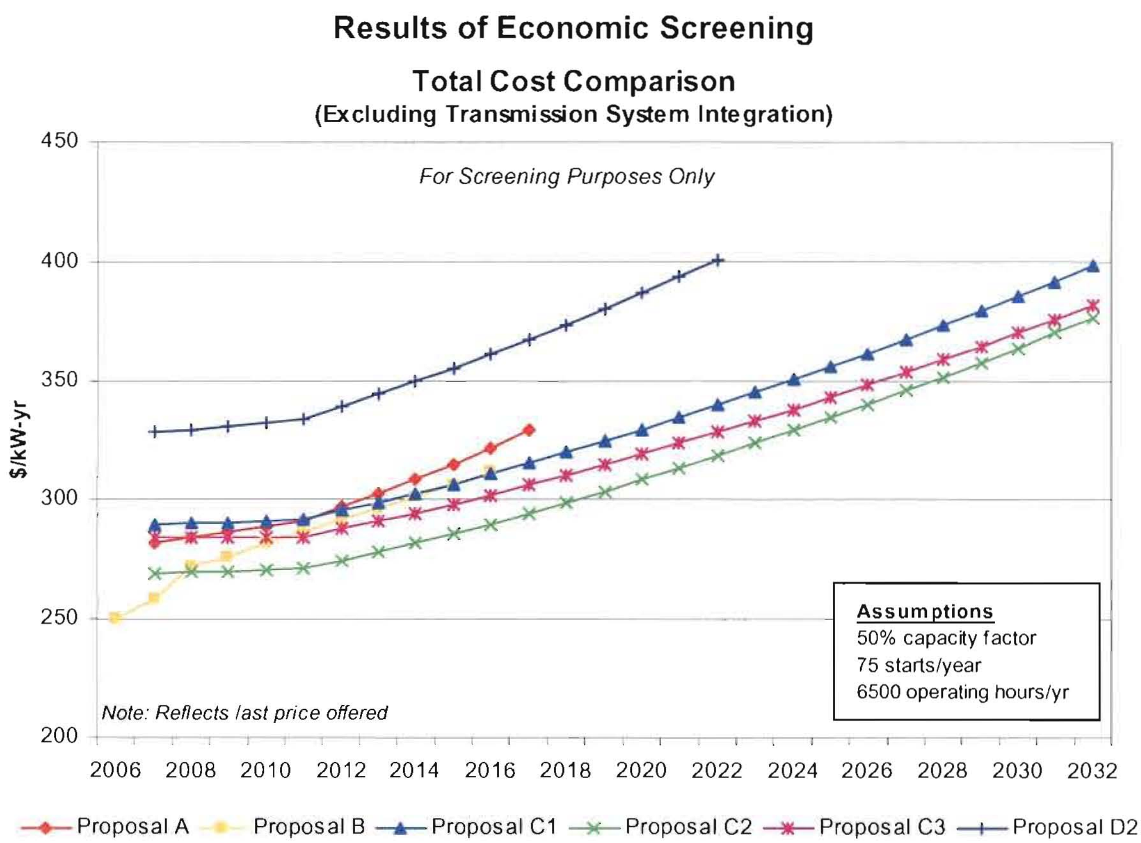
		Bidder	A	B	C1	C2	C3	D1	D2
A.	**General Requirements**								
	•	The proposal is received on time.	Y	Y	Y	Y	Y	Y	Y
	•	The offer is reasonable and bona fide.	Y	Y	Y	Y	Y	Y	Y
	•	Complete and credible answers are provided to all questions.	N/Y	N/Y	N/Y	N/Y	N/Y	N/Y	N/Y
	•	The proposal submittal fee is included.	Y	Y	Y	Y	Y	Y	Y
	•	The pricing schedules are properly specified.	N/Y	N/Y	N/Y	N/Y	N/Y	N/Y	N/Y
	•	The proper price indices are used.	--	--	N/Y	N/Y	N/Y	N/Y	N/Y
	•	Power must be available for delivery under the contract by December 1, 2007.	Y	Y	Y	Y	Y	N	Y
	•	The proposed term is for a minimum of one (1) year if the project does not require a Need Determination and 10 years if a Need Determination is required. The proposed term is less than the maximum of 25 years.	Y	Y	Y	Y	Y	Y	Y
	•	For New Unit Proposals located in Florida, the output of the unit(s) is sufficiently committed to Progress Energy Florida (or other utilities serving retail customers).	Y	Y	Y	Y	Y	Y	Y
B.	**Operating Performance Thresholds**								
	•	If the project is located in PEF's control area, the Bidder will be required:							
		– to operate the project to conform with PEF's ***Voltage Control*** requirements.	--	--	Y	Y	Y	Y	Y
		– to operate the project to conform with PEF's ***Frequency*** Control requirements.	--	--	Y	Y	Y	Y	Y
	•	New and Existing Unit Proposals must be Fully Dispatchable and install Automatic Generator Control that is tied into PEF's Energy Control Center.	--	--	Y	Y	Y	Y	Y
	•	The Bidder must be willing to coordinate the project's maintenance scheduling with PEF.	Y	Y	Y	Y	Y	Y	Y
	•	Proposals should have a project size less than or equal to approximately 500 MW.	Y	Y	Y	Y	Y	Y	Y
	•	System Power Proposals must be Fully Schedulable (i.e., operate according to a day-ahead schedule but with schedule changes subject to normal utility practices).	Y	Y	Y	Y	Y	Y	Y
C.	**Contractual Thresholds**								
	•	Bidders must agree to each of the Key Terms and Conditions identified in Attachment A.	--	--	--	--	--	--	--
		- OR -							
	•	If Bidder has any objections to the Key Terms and Conditions, the Bidder must:							
		• Identify the language which is objectionable;	Y	Y	Y	Y	Y	Y	Y
		• Provide revised language.	Y	Y	Y	Y	Y	Y	Y
D.	**Site Control Thresholds [New and Existing Unit Proposals]**								
	•	Identification of the site location on a USGS map.	Y	Y	Y	Y	Y	Y	Y
	•	At a minimum, a Letter of Intent to negotiate a lease for the full contract term or term necessary for financing (whichever is greater), or to purchase the site...	N/Y	Y	Y	Y	Y	N/Y	N/Y
E.	**Transmission Threshold**								
	•	If the project is located outside of PEF's control area, the Bidder must provide a transmission plan for wheeling services...	N/Y	N/Y	--	--	--	--	--
	•	If the project is located inside of PEF's control area, the Bidder must complete a Network Resource System Impact Study data request (Schedule 7 of the Response Package).	--	--	Y*	Y*	Y*	Y	Y

* Clarification/additional information needed (and later received)

-- Not applicable to this type of proposal

N/Y Initially did not pass threshold. Later provided information to pass threshold.

Exhibit ___ **(DJR-6)**



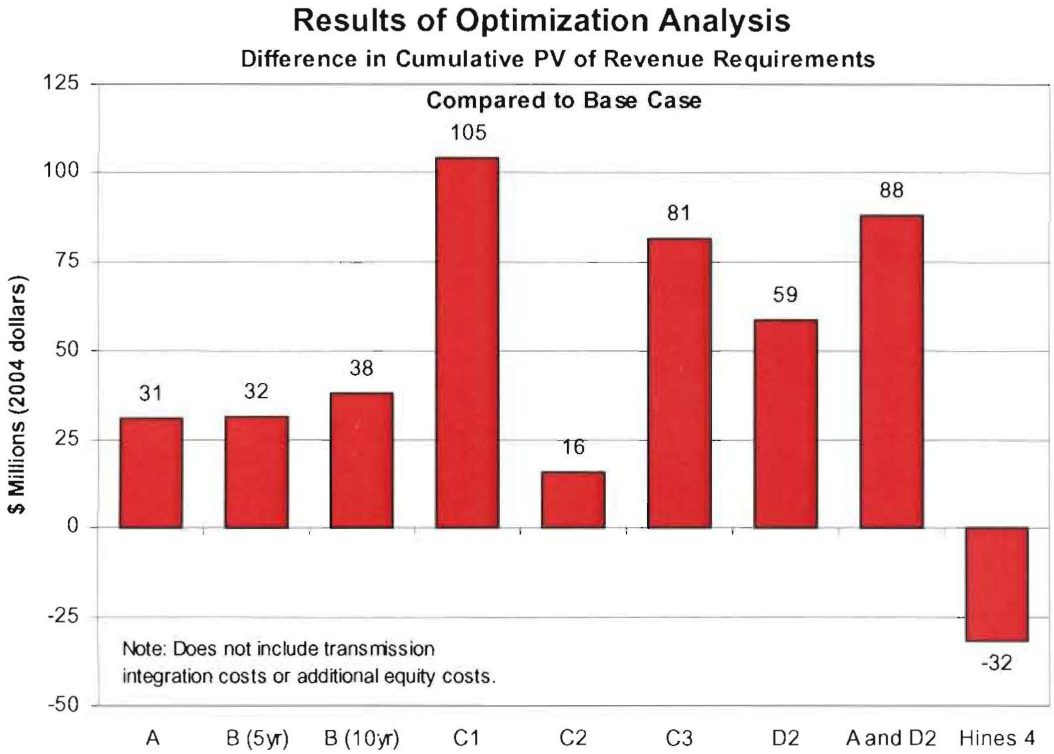

Results of Optimization Analysis
Difference in Cumulative PV of Revenue Requirements
Compared to Base Case
$ Millions (2004 dollars)
125
100
75
50
25
0
-25
-50
31
32
38
105
16
81
59
88
-32
Note: Does not include transmission integration costs or additional equity costs.
A
B (5yr)
B (10yr)
C1
C2
C3
D2
A and D2
Hines 4

Exhibit ___ **(DJR-8)**

Minimum Evaluation Requirements

A. Environmental

- Preliminary environmental analysis performed and submitted to PEF [New Unit Proposals].
- Reasonable schedule for securing permits presented and evidence provided that permits are likely to be secured [New Unit Proposals].

B. Engineering and Design

- The project technology will be able to achieve the operating targets specified by the Bidder [New Unit and Existing Unit Proposals].
- Operation and Maintenance Plan provided which indicates that the project will be operated and maintained in a manner adequate to allow the project to satisfy its contractual commitments [New Unit and Existing Unit Proposals].

C. Fuel Supply and Transportation Plan

- Preliminary fuel supply plan provided which describes the Bidder's plan for securing fuel supply and transportation for delivery to the project. The plan shall provide a description of the fuel delivery system to the site, the terms and conditions of any existing or proposed fuel supply and transportation arrangements, and the status of such arrangements [New Unit and Existing Unit Proposals].

D. Project Financial Viability

- For New Unit Proposals, evidence provided that demonstrates the project is financially viable [New Unit Proposals].
- Demonstration that the Bidder has sufficient credit standing and financial resources to satisfy its contractual commitments [All Proposals].

E. Project Management Plan

- For a New Unit Proposal, critical path diagram and schedule for the project provided which specify the items on the critical path and demonstrate the project would achieve commercial operation by December 1, 2007 [New Unit Proposals].

Exhibit ___ **(DJR-9)**

Technical Criteria

Development Feasibility	Project Value	Operational Quality
Permitting Certainty (N)	Acceptance of Key Terms and Conditions (N,E,S)	Minimum Load (N, E)
Financial Viability (N,E,S)	Fuel Supply and Transportation Reliability (N,E)	Start Time (N, E)
Commercial Operation Date Certainty (N)	Reliability Impact (N,E,S)	Ramp Rate (N, E)
Bidder Experience (N,E,S)	Flexibility Provisions (N,E,S)	Maximum Starts/Year (N, E)
		Minimum Run-Time Constraint (N, E)
		Minimum Down-Time Constraint (N, E)
		Annual Operating Hour Limit (N, E)

Exhibit ___ **(DJR-10)**

Final Results of Technical Evaluation

	Minimum Evaluation Requirements	A	B	C	D	Hines 4
A1	Preliminary environmental analysis is performed and submitted to PEF	Go	N/A	Go	N/A	Go
A2	Reasonable schedule for securing permits presented and evidence provided that permits are likely to be secured	Go	N/A	Go	N/A	Go
B1	The project technology will be able to achieve the operating targets specified by the Bidder	Go	Go	Go	Go	Go
B2	O&M Plan provided that indicates that the project will be operated and maintained adequate to allow the project to satisfy its contractual commitments	Go	Go	Go	Go	Go
C	Fuel Supply and Transportation Plan provided for securing fuel supply and transportation for delivery to the project	Go	Go	Go	Go	Go
D1	For New Unit Proposals, evidence provided that demonstrates the project is financially viable	Go	N/A	Go	Go	Go
D2	Demonstration that the Bidder has sufficient credit standing and financial resources to satisfy its contractual commitments	Go	Go	Go	Go	Go
E	For a New Unit proposal, critical path diagram and schedule provided demonstrating the project would achieve commercial operation by 12/1/07	Go	N/A	Go	Go	Go
	Technical Criteria					
	Development Feasibility					
1	Permitting Certainty	2	N/A	2	N/A	1
2	Financial Viability	5	4	2	3	1
3	Commercial Operation Date Certainty	3	N/A	3	1	2
4	Bidder Experience	3	5	4	1	2
	Project Value					
5	Acceptance of Key Terms & Conditions	4	1	3	2	N/A
6	Fuel Supply and Transportation Reliability	5	2	2	4	1
7	Reliability Impact	4	5	2	1	2
8	Flexibility Provisions	N/A	N/A	N/A	N/A	N/A
	Operational Quality					
9	Minimum Load	3	1	4	2	5
10	Start Time	3	5	4	1	2
11	Ramp rate	2	4	3	5	1
12	Maximum Starts/Year	1	5	1	1	1
13	Minimum Run-Time	5	3	4	1	2
14	Minimum Down Time	2	5	3	1	3
15	Annual Operating Limit	1	5	1	1	1

Exhibit ___ (**DJR-11**)

Results of Detailed Economic Analysis-Costs by Component