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August 7, 2009

Ms. Ann Cole, Director
Division of the Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

VIA HAND DELIVERY

Re: Nuclear Power Plant Cost Recovery Clause, Docket 090009-EI

Dear Ms. Cole:

Enclosed for filing on behalf of Progress Energy Florida, Inc. ("PEF") in the above-referenced docket are an original and 15 copies of the following rebuttal testimony and exhibits of PEF witnesses:

COM 5
ECR 3
GCL 2
OPC
RCP
SSC
SGA 1
ADM
CLK 1

Jeffrey J. Lyash
Garry Miller
Gary Furman
Will Garrett
Jon Franke
Gary Doughty
Hugh Thompson

PEF is also filing its Sixteenth Notice of Intent to Request Confidential Classification for portions of the above testimony and exhibits.

DOCUMENT NUMBER-DATE
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Please acknowledge your receipt and filing of the above on the enclosed copy of this letter and return same to me.

Sincerely,

Dianne M. Triplett

Dianne M. Triplett

Enclosures
cc: Counsel of record (w/enclosures)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Nuclear Cost Recovery Clause

DOCKET NO. 090009

Submitted for filing:
August 10, 2009

REDACTED

REBUTTAL TESTIMONY OF JEFF LYASH

ON BEHALF OF
PROGRESS ENERGY FLORIDA

IN RE: NUCLEAR COST RECOVERY CLAUSE

BY PROGRESS ENERGY FLORIDA

FPSC DOCKET NO. 090009

REBUTTAL TESTIMONY OF JEFF LYASH

I. INTRODUCTION AND QUALIFICATIONS.

Q. Please state your name and business address.

A. My name is Jeff Lyash. My current business address is 410 S. Wilmington St., PEB 13, Raleigh, North Carolina 27602.

Q. By whom are you employed and in what capacity?

A. I am currently employed by Progress Energy, Inc. as the Executive Vice President of Corporate Development. I assumed my current position on July 6, 2009. Prior to this appointment, I was employed by Progress Energy Florida, Inc. ("PEF" or the "Company") as its President and Chief Executive Officer ("CEO") from 2006 until July 6, 2009. In this role, I had overall responsibility for the operations of Progress Energy Florida.

Q. What was your role with respect to the development of the nuclear power plants, Levy Units 1 and 2?

A. The Levy nuclear power plants, Levy Units 1 and 2, when constructed will be PEF assets so in my position as the President and CEO of PEF I had broad responsibility for the development of the Levy nuclear power plant project

("LNP"). As the LNP progressed, the Nuclear Plant Development ("NPD") organization was formed as a separate group from the Nuclear Generation group to take responsibility for the LNP. At that point, in early 2008, the NPD reported to me for direct line accountability for the LNP development. I also served as the chair of the Levy Integrated Nuclear Committee ("LINC"), which is comprised of PEF leaders with organizational accountability for areas that support the LNP. The group helps coordinate activities that cross multiple organizational areas because of the integrated nature of the LNP. LINC scheduled meetings at least monthly and sometimes weekly to review project activities, evaluate business conditions, address emerging issues, and discuss agenda items.

In my new role as Executive Vice President of Corporate Development, the NPD will still report to me and I will continue to have management responsibility for the LNP. Also, as President and CEO of PEF and now as Executive Vice President of Corporate Development, I am a member of the Senior Management Committee ("SMC"), which has senior management responsibility for the LNP. I have briefed the SMC and participated in the SMC's decisions with respect to the LNP, and I have briefed the Progress Energy Board regarding the LNP.

Q. Please describe your educational background and professional experience.

A. I graduated with a bachelor's degree in mechanical engineering from Drexel University in 1984. Prior to joining Progress Energy, I worked with the Nuclear Regulatory Commission ("NRC") in a number of capacities. While with the

NRC, I served as a senior resident inspector, a project manager, a project engineer, and a section chief. In 1993, I joined Progress Energy, and spent eight years at the Brunswick Nuclear Plant in Southport, North Carolina, ultimately becoming Director of Site Operations. In January 2002, I assumed the position of Vice President of Transmission/Energy Delivery in the Carolinas. On November 1, 2003, I was promoted to Senior Vice President of Energy Delivery-Florida. On June 1, 2006, I was promoted to President and CEO of PEF. On July 6, 2009, I was appointed the Executive Vice President of Corporate Development for Progress Energy, which is the position I currently hold.

Q. What is the purpose of your rebuttal testimony?

A. I will explain why execution of the Engineering, Procurement, and Construction ("EPC") contract with Westinghouse and Shaw, Stone & Webster (the "Consortium") by PEF at the end of December 2008 was reasonable and prudent based on the information we had at the time. In sum, execution of the EPC agreement in December 2008 preserved benefits that were obtained for PEF and its customers after about two years of hard-fought negotiations with the Consortium. Execution of the EPC agreement in December 2008 also provided an orderly framework to accommodate potential adjustments to the schedule such as the schedule shift that has resulted from NRC's decision with respect to the Limited Work Authorization ("LWA").

I will also explain why the LNP remains feasible, and why the intervenors' approach to feasibility is inconsistent with the long-term nature of the project, would make the Need Determination proceeding meaningless, and would stop the project.

Q. Have you reviewed the Intervenor and Staff Testimony filed in this Docket?

A. Yes, I have. I have reviewed and I will provide rebuttal testimony to the following intervenor and Staff direct testimony: (1) William R. Jacobs, Jr., ("Jacobs") filed on behalf of the Office of Public Counsel ("OPC"); (2) Arnold Gundersen, filed on behalf of Southern Alliance for Clean Energy ("SACE"); (3) Mark Cooper, filed on behalf of SACE; (3) Peter Bradford, filed on behalf of White Springs Agricultural Chemicals, Inc. d/b/a PCS Phosphate – White Springs ("PCS Phosphate"); and (4) Mr. William Coston and Mr. Geoff Cryan, filed jointly on behalf of the Florida Public Service Commission ("FPSC" or the "Commission") Staff. I did not review the testimony of Mr. Small filed on behalf of the Commission Staff. My understanding is that Mr. Small addresses the allocation of costs to the LNP and land held for future use for one of the Levy parcels and Mr. Will Garrett will address that testimony on behalf of the Company. Also, Mr. Garry Miller will provide rebuttal testimony to certain Intervenor and Staff witness direct testimony in this proceeding.

Q. Do you have any exhibits to your rebuttal testimony?

A. Yes. I am sponsoring the following exhibits:

- Exhibit No. ___ (JL-1), Excerpts of the Deposition of Jacobs, witness for the Office of Public Counsel ("OPC"), taken July 27, 2009 in this proceeding; and executed. The potential joint owners reasonably wanted to know what the final, signed EPC Agreement provided before they signed any type of joint ownership participation agreement. These were risks at the time the EPC Agreement was signed, and there were others, but the Company was aware of and had evaluated these risks, and had adopted risk mitigation plans for them consistent with the Company's risk management policies. No one contends that PEF's risk management policies and risk mitigation plans were unreasonable or imprudent.

PEF's feasibility analysis is adequate and consistent with our understanding of the purposes of the rule and nuclear cost recovery statute. PEF's feasibility analysis represents the necessary analysis to determine if long term, base load nuclear generation projects, like Levy Units 1 and 2, can be completed. The variations of the cost-effective analysis that the various intervenors propose are unworkable for assessing the long term viability of the LNP. PEF does not make decisions about long term, base load generation projects like the LNP based on year-to-year fluctuations in projections, which is what the intervenors propose. This approach to feasibility provides no regulatory certainty and is inconsistent with the statutory and regulatory purpose of encouraging utility investment in nuclear power plants.

III. EXECUTION OF THE EPC AGREEMENT.

Q. Were you involved in the Company's decision to execute the EPC Agreement on December 31, 2008?

A. Yes. As the President and CEO of PEF at the time, I was involved in the Company's decision to sign the EPC agreement. I approved execution of the EPC agreement at that time, I was a member of the SMC that also approved the execution of the EPC agreement, and I worked with the Progress Energy Board that also decided to approve execution of the EPC agreement in December 2008.

Q. Why did the Company execute the EPC agreement in December 2008?

A. We signed the EPC agreement primarily because of the following beneficial negotiated contract terms and provisions:

[redacted]

Of particular concern to me and the Company at the time was [redacted].

In March 2008, when the Company executed the Letter of Intent ("LOI") for, among other things, the long-lead items for the project, the objective was to progress with EPC contract negotiations and reach acceptable conclusions so that an EPC agreement could be executed. An initial target date for completion of negotiations was set in the LOI for late summer 2008 but by this time there were still additional, outstanding issues, including [redacted], which needed to be resolved. By the end of the year, the outstanding contract issues that needed to be resolved were resolved and, with these issues resolved and the EPC agreement ready for execution, [redacted]

Additionally, execution of the EPC agreement at this time was necessary to move the project forward on schedule for completion of the units by their 2016 and 2017 in-service dates. The Company had a need determination recognizing the Company's need for additional base load power commencing in 2016. PEF was reasonably moving forward with the LNP to meet those in-service dates.

Q. Some of the intervenor witnesses claim PEF should have waited until the NRC issued its review schedule for the PEF COLA before signing the EPC agreement. Was that option available to PEF?

A. No. As I have explained, the negotiations were at an end, there were no additional outstanding contract issues to resolve, and therefore [redacted]. I personally met with senior executives of both Westinghouse and Shaw, Stone, & Webster and they told me [redacted].

Furthermore, the Company and Consortium had negotiated the terms of the EPC agreement for about two years and the Company had no reasonable ground to stall the signing of the EPC agreement now that those negotiations were complete. In particular, schedule uncertainty was not a valid reason to postpone execution of the EPC agreement because the EPC agreement contained provisions to address changes in the schedule. And, because the Consortium had invested about two years in negotiations with PEF over the terms of the EPC agreement, [redacted]

Q. Can you explain what a LWA is, Mr. Lyash?

A. Yes. A LWA is a limited work authorization issued by the NRC under 10 CFR Parts 50 and 52. If a LWA is requested by the utility, it can be reviewed and authorized by the NRC in advance of the overall issuance of the Combined Operating License ("COL"). If the LWA is issued, it allows the utility constructing a nuclear plant to do certain site work prior to the issuance of the COL. Thus, when the COL is issued, the utility can begin actual construction of the safety-related nuclear reactor building. A LWA request was part of the Company's Combined License Application ("COLA") for the LNP.

Q. What did the NRC do with the Company's LWA request?

A. On January 23, 2009, the NRC told us that the NRC was going to review the Company's LWA on the same schedule as the NRC's review of the COL. This communication is reflected in the Company's document included as an exhibit to Jacobs' testimony at page 28 of 233 of Exhibit WRJ(PEF)-3. The NRC's decision to review the LWA and COL concurrently rather than sequentially meant in effect that the NRC cannot issue a LWA for the LNP. The sole purpose of the LWA rule is to expedite the NRC's review of certain construction activities to allow them to begin before the COL is issued. If the LWA is reviewed and issued on the same schedule as the COL, those construction activities cannot take place before the issuance of the COL.

Q. Did the Company have any reason to believe the NRC was going to do what it did with the Company's LWA request when the Company signed the EPC agreement?

A. No. The Company had no reason to believe in December 2008 that the NRC was going to review and issue a LWA at the same time as the COL for the LNP. In our dealings with the NRC prior to January 23, 2009, there was no indication from the NRC that the NRC was not going to issue a LWA until it issued the COL. To the contrary, prior to January 23, 2009, we had every reason to believe that the NRC was in fact considering the Company's LWA request as we proposed.

First, the NRC has a rule that allows LWA requests. That rule was amended in 2007 with utility industry input to better clarify the use of LWAs on nuclear power plant projects. The fact that the NRC has a rule, and that the NRC worked with the industry to refine that rule, indicates that the NRC was willing to and would review and issue LWAs. Jacobs, OPC's witness, agrees the existence of the LWA rule was an indication to utilities that LWAs could be granted on new nuclear projects. See Exhibit No. ___ (JL-1) (Jacobs Dep. Excerpt, pp. 79-80).

Second, the Company met with the NRC several times before and after it submitted its COLA to explain the COLA, including the fact that the COLA included a LWA request and what that LWA request entailed. At no time during these discussions did the NRC indicate that it was not going to issue a LWA for the LNP.

Third, the Company submitted its COLA with the LWA on July 31, 2008. In September, the NRC requested that the Company revise its LWA request to include certain preconstruction work – the dewatering work necessary for excavation -- that the Company believed was outside the LWA scope and exclude certain preconstruction work that the NRC believed did not need to be included in the LWA. The fact that the NRC had requested these revisions to the LWA scope indicated that the NRC was in fact considering the Company's LWA request.

Additionally, the Company revised its LWA to accommodate the NRC's request and, after it had done so, the NRC docketed the COLA with the revised LWA on October 6, 2008. By docketing the COLA with the LWA, the NRC indicated that the Company had met the heightened standard of rigorous technical review that the NRC applies to its determination to accept for review a COLA and that the COLA -- including the LWA -- was sufficient for NRC review.

Finally, the NRC did say that it needed additional information because of the geotechnical complexity of the site to develop the review schedule. The NRC included Requests for Additional Information ("RAIs") with the October 6, 2008 letter. These RAIs are a normal part of the NRC licensing review process and were answered by the Company on November 20, 2008. The NRC at no time said the Company's responses to these RAIs were insufficient. Again, these actions indicated that the NRC was considering the Company's COLA, including the LWA, as PEF had requested.

Q. Were you personally involved in communications with the NRC prior to execution of the EPC agreement?

A. Yes, I met with NRC commissioners and staff to discuss the LNP in several meetings called "drop in" meetings. The NRC permits as a matter of practice "drop in" meetings with the NRC commissioners and staff. These are scheduled meetings to discuss the status of applications or projects before the NRC. The purpose of these meetings was to discuss the process for the new license applications, the general status of the LNP, and to make sure that we were aware of the NRC's expectations and that we were meeting those expectations. I had several "drop in" meetings regarding the LNP, including one meeting immediately prior to execution of the EPC agreement. I traveled to Washington to meet with the NRC to explain that the Company was prepared to execute the EPC agreement for the LNP and to generally discuss the Company's COLA. We did not specifically discuss the LWA, but at no time in this meeting, or in any of the prior meetings with the NRC, did the NRC ever inform us that the NRC was not going to issue a LWA for the LNP as the Company requested.

I was also informed about the discussions and communications between our staff and the NRC staff regarding the COLA prior to our execution of the EPC agreement. At no time was I informed or did I see any indication from the NRC that the NRC was not going to issue a LWA for the LNP.

Q. Are you aware that certain intervenor witnesses claim PEF should have known that the NRC was not going to grant the review schedule PEF requested before signing the EPC agreement?

A. Yes, I am, but their claims benefit from the hindsight knowledge of what the NRC said about the LWA in January 2009. The NRC never told the Company nor intimated that the NRC would not issue the LWA until it issued the COL. In our experience with the NRC, when the NRC wants to tell us something they do so, they do not leave room for doubt. When the NRC determined in January 2009 that it was going to review the LWA on the same timeline as the COL and not sequentially as PEF had requested that is what the NRC expressly said it was going to do. See Exhibit WRJ(PEF)-3, p. 28 of 233. Even OPC witness Jacobs concedes that the NRC's January 2009 statement on the LWA clearly expressed the NRC's intentions. See Exhibit No. ___ (JL-1) (Jacobs Dep. Excerpt, p. 87). There is no dispute that the NRC did not make that same express statement to PEF prior to January 23, 2009. (Id. at p. 100).

The intervenors make much of the statement by the NRC in the October 6, 2008 docketing letter that the NRC was unlikely to complete the LNP COLA review in accordance with PEF's requested timeline. See Exhibit WRJ(PEF)-3, pp. 1-10 of 233. The intervenors read more into this statement than is there, again, because they know what the NRC ultimately said in January 2009. In doing so, however, they miss the critical point that the NRC was indicating in this very statement that the NRC was still reviewing the LWA and had not decided then that it was not going to issue the LWA as the NRC ultimately concluded months later. In fact, the "timeline" that the NRC referred to included issuance of the LWA by September 2010. The "timeline" also included issuance of the Final Environmental Impact Statement ("FEIS") in June 2010 and COL issuance in January 2012. When the NRC said it was unlikely that the COLA review – which included the LWA – could be completed in accordance with "this requested timeline" that "timeline" included the LWA. See Exhibit WRJ(PEF)-3, p. 2 of 233. At most, the NRC was stating that one or more of those items might not be issued in accordance with PEF's requested schedule. The only reasonable reading of this language is that the specifically requested dates for the FEIS, LWA, and COL that PEF requested might slip by weeks or a few months. But, nothing in that letter could be reasonably interpreted as suggesting that the NRC was not going to issue a LWA at all. That is the way PEF interpreted the October 6, 2008 docketing letter.

Q. The intervenors also reference the NRC's statements about the complexity of the site characteristics in this October 6, 2008 letter and the NRC's request for additional information as reasons for concern regarding the Company's LWA request. Do you agree?

A. No. It is important to remember that the purpose of the NRC's review of the Company's COLA is the application of the AP1000 nuclear power plants to the specific Levy site. NRC review of the AP1000 design itself is already underway under a separate reference COLA. As a result, the NRC will focus its review of the PEF COLA on the site characteristics to determine how that AP1000 design for the nuclear power plants will actually be built on the Levy site. This review requires the NRC to ask geotechnical questions through RAIs. The fact that the NRC issues RAIs means the NRC is doing its job. It does not mean the NRC has "doubts" or "concerns" --- or that there were problems with the Company's COLA or LWA --- in the way the intervenor witnesses seem to use these words.

The mere fact that the NRC was asking geotechnical questions and questions about the site characteristics does not mean that the NRC was not going to issue the LWA. To the contrary, by docketing the Levy COLA, including the LWA, the NRC indicated that it believed the application was technically sufficient to indicate that the AP1000 design could in fact be applied to the Levy site despite the complex geotechnical and site characteristics. The NRC would not have docketed the PEF COLA if the NRC had "serious doubts" or "concerns" about building the AP1000 nuclear power plants on the Levy site because of the site geology or other site characteristics.

The fact that the NRC acknowledged the complexity of the site also does not mean there was a problem with PEF's COLA or LWA. Designing, engineering, and building nuclear plants is complex; however, it has been done numerous times in the past, including on many "Greenfield" sites, and there are five nuclear power plants operating for decades in Florida today that were built on complex sites, including the one at Crystal River within 10 miles of the Levy site and closer to the coast. PEF addressed the Levy site complexity in a detailed geotechnical review to arrive at the site sub-foundation and foundation design that took eighteen (18) months to complete. Under its requested timeline, PEF provided the NRC approximately thirty (30) months to review and issue the LWA. This was, in PEF's view, more than enough time to review all the information that PEF had developed in eighteen (18) months and issue a decision.

Before January 23, 2009, the NRC never said that the geotechnical review scope required the same duration for the LWA review as the COL review. In fact, the NRC never said on January 23, 2009 that the site complexity or geotechnical questions alone meant the LWA could not be issued. Rather, the NRC linked the review of the geotechnical scope to the NRC's lack of resources to process the LWA sequentially rather than concurrently with the COL. See Exhibit WRJ(PEF)-3, p. 28 of 233. There is no dispute that this was the first time that the NRC had stated that lack of resources would cause a lengthy delay in processing PEF's LWA request. More important, given that PEF was able to complete its geotechnical analysis in eighteen months, there was no reason for PEF to believe at the time it executed the EPC agreement that lack of NRC resources would necessitate such a long delay in processing the LWA.

Q. Was there some reason to expect PEF's requested review schedule was in jeopardy because the NRC did not issue the review schedule thirty days after the PEF COLA was docketed on October 6, 2008?

A. No. The NRC in fact told us in that letter that the NRC was not going to issue the review schedule until the NRC received additional information from the Company. The October 6, 2008 letter included RAIs that were answered by the Company on November 20, 2008. So, there was no reason to expect a review schedule from the NRC before November 20, 2008 or some reasonable time after that date to allow the NRC time to review the additional information and develop a review schedule. At that point, however, the release of the review schedule by the NRC was impacted by the holidays; it had nothing to do with the substance of PEF's requested review schedule. Even Jacobs, OPC's expert, agreed that there is no NRC requirement to issue a review schedule thirty days after the COLA is docketed, no NRC statement voluntarily committing to such a release schedule, and no NRC statement that suggests the utility should be concerned with the review schedule if the utility does not receive it within this thirty-day period. See Exhibit No. ___ (JL-1) (Jacobs Dep. Excerpt, pp. 109, 112).

Q. Jacobs argues that the Company was in a weaker negotiating position with the Consortium when the schedule shift occurred because PEF had signed the EPC agreement. Do you agree?

A. Absolutely not. PEF is in a stronger position with the Consortium with respect to the schedule shift having signed the EPC agreement than if PEF had not signed it. In fact, had PEF known about the NRC's position with respect to the LWA in December 2008 and [redacted], PEF would have still executed the EPC agreement and proceeded to amend the EPC agreement under the EPC's contract suspension and amendment provisions just like PEF is doing now.

Executing the EPC agreement in December 2008 [redacted] The EPC agreement also provided a clear, known process for a suspension of the work, subsequent rescheduling, and amendment to the EPC agreement for such events like the schedule shift. If PEF had not signed the EPC agreement in December 2008 and the schedule shift occurred, [redacted]

[redacted]

Additionally, if PEF had not executed the EPC agreement on December 31, 2008 there would have been a schedule shift regardless of the NRC's decision with respect to the LWA. The EPC agreement included the engineering and construction schedule for completion of the plants in time for their respective in-service dates in 2016 and 2017. [redacted] A schedule delay would inevitably occur [redacted] That delay would likely have been at least as long as the current schedule shift and probably longer due to [redacted] NRC had issued a review schedule that included the LWA.

For these reasons PEF would have been in a weaker position with the Consortium had it not signed the EPC agreement when it did. I know this because before finalizing the joint ownership participation agreements. That is what PEF meant when it frequently said in internal documents that joint ownership was "closely linked" or "closely tied to" the EPC agreement.

Q. Is PEF required to have joint owners or to demonstrate that there will be joint owners in the LNP?

A. No. There is no joint ownership requirement for the LNP. PEF cannot force potential joint owners to participate in the LNP. The Commission recognized this in the Need Determination Order when the Commission encouraged PEF to pursue joint owners. The Commission did not require joint ownership for the LNP. PEF has pursued and continues to pursue joint owner participation in the LNP consistent with the Commission's encouragement.

As PEF explained in the need determination proceeding, there are benefits to joint ownership for PEF and its customers in sharing the costs and risks of the LNP with other parties. PEF continues to believe those benefits exist. PEF, therefore, expects to have some level of joint ownership participation in some form in the LNP. There is also continued interest by other parties in participation in the LNP. The level and intensity of that interest changes over time, and has been affected by recent economic events, but it is still there. [redacted]

[redacted]. Now, however, finalization of any joint ownership participation agreement will, again, depend on the costs and schedule in the amended EPC agreement. We expect to reach joint ownership participation agreements only after we have an amended EPC agreement.

Q. Are the impacts of the economy on the capital markets, financing, and regulatory and legislative uncertainty risks that the Company has considered and will consider in making its decisions with respect to the LNP?

A. Yes. These risks were identified by management as part of the Company's risk management practices and policies, there were risk mitigation strategies developed for these risks, and those strategies have been employed by the Company throughout the course of the LNP so far. Notably, neither the Staff witnesses nor the intervenor witnesses assert that PEF's risk management practices and policies, or PEF's application of those policies with respect to the risk mitigation strategies the Company developed, are not reasonable or not prudent.

These risks cannot be eliminated; they can only be monitored and managed with appropriate responsive risk mitigation strategies. These risks also exist, however, for any generation or other utility project and certainly they exist for any long term, base load generation project like the LNP. It is unreasonable to expect a utility to eliminate these risks or obtain certainty with respect to these risks for a nuclear power plant project. If that was the expectation, no utility would build a nuclear power plant.

Q. Jacobs makes several statements about the Progress Energy Board at pages 12-14, 16 and 20 of his testimony. He claims the Board was not adequately informed prior to execution of the EPC agreement, he claims the Board had other reasons for delaying the project besides the schedule shift, and he claims that the Board had a different view than Mr. Miller with respect to the feasibility of completing the nuclear power plants. Can you address these claims?

A. Yes, I can because I was there, Jacobs was not. I was present at each of the Board meetings Jacobs references in his testimony and I know what was discussed. First, he claims the Board was not adequately informed about the NRC COLA review, in particular the LWA, and joint ownership at the December 2008 Board meeting where the execution of the EPC agreement was approved. This is inaccurate and untrue. [redacted]. The LWA was not specifically addressed apart from the COLA because there was no reason to expect that the NRC was not going to issue the LWA at all prior to January 23, 2009, for all the reasons I have provided above. Jacobs is again relying on hindsight to suggest the Board should have been told in December about an event that did not occur until January.

Jacobs is simply wrong that the status of joint ownership was not discussed. [redacted] (at page 110 of Jacobs

Exhibit No. WRJ(PEF)-3) [redacted] Jacobs speculates that the Board changed its position regarding whether or not joint ownership agreements were required before PEF executed the EPC agreement. Exhibit No. ___ (JL-1) (Jacobs Dep. Excerpt, p. 139). As I previously explained, PEF never expected to have joint ownership participation agreements signed before the EPC agreement was executed. Rather, PEF expected that reasonable joint ownership participants would want to know what the final, executed EPC agreement provided before committing to a joint ownership participation agreement. Moreover, as I have noted, [redacted]

Second, Jacobs claims certain words in the April 15, 2009 letter from the Progress Energy CEO to the Board indicate that PEF had other reasons for the schedule shift besides the NRC determination with the respect to the Company's LWA request. (See Jacobs Test., p. 12; Exhibit No. WRJ(PEF)-3, pp. 42-43). This claim ignores the plain language of the letter. The letter itself is dated April 15, 2009, which is after the NRC's determination with respect to the LWA. [redacted]. Exhibit No. ___ (JL-1) (Jacobs Dep. Excerpt, p. 142).

REDACTED

[redacted]. (Id. at p. 143).

Finally, Jacobs claims that Mr. Miller's discussion about the long term benefits of the LNP nuclear power plants in his direct testimony regarding the feasibility of completing the power plants is at odds with the Board's discussions at the April 17, 2009 Board meeting. Jacobs is wrong. [redacted] This discussion is reflected under the "Summary" bullet point that references the fact that "Levy nuclear remains vital to [Progress Energy's] Balanced Solution." (See Exhibit WRJ(PEF)-3, p. 58 of 233). These bullet points introduce issues for discussion; they do not reflect the substance of that entire Board discussion. Progress Energy's Balanced Solution, however, calls for advanced generation resources such as the LNP for all of the reasons described in Mr. Miller's testimony.

IV. FEASIBILITY.

Q. Have you read the intervenor witness testimony with respect to the Company's feasibility analysis under Rule 25-6.0423(5)(c)5, F.A.C.?

A. Yes, I have. There certainly has been a lot of discussion and opinions about what feasibility means under this rule and what the Company should or should not do to provide a feasibility analysis consistent with the intent of the rule. The Company has provided a feasibility analysis consistent with the purpose of the rule in Mr. Miller's direct testimony. I will explain why the Company believes it has provided the detailed analysis of the feasibility of completing the nuclear power plants, Levy Units 1 and 2, in the manner that a utility must assess the feasibility of completing a long-term, base load generation project like the Levy Units 1 and 2 nuclear power plants.

Q. What is your understanding of what the rule requires?

A. The rule states in relevant part that the Company "shall submit for Commission review and approval a detailed analysis of the long-term feasibility of completing the power plant." Rule 25-6.0423(5)(c)5, F.A.C. The Commission's Need Determination Order for Levy Units 1 and 2 said essentially the same thing. There are no requirements or standards in the rule, however, that spell out what this feasibility analysis is supposed to look like. The Company is simply directed to provide a detailed analysis of the feasibility of completing the power plant.

Q. What does this rule mean to the Company?

A. The Company has always understood the provisions of the rule should be read in light of the purpose of the rule, which is to establish alternative cost recovery mechanisms for the recovery of costs incurred in the siting, design, licensing, and construction of nuclear power plants in order to promote electric utility investment in nuclear power plants. We believe this purpose applies to the entire rule, including the feasibility analysis requirement in subsection (5)(c)5. We understand this was the legislative purpose too in directing the Commission to develop alternative cost recovery mechanisms for such costs. The Florida Legislature wanted to promote electric utility investment in nuclear power plants in Florida. From the utility's perspective, if the Florida Legislature wants to promote electric utility investment in nuclear power there must be alternative cost recovery mechanisms for the utility's recovery of its prudently incurred costs in the siting, design, licensing, and construction of nuclear power plants. Without such alternative cost recovery mechanisms the Company would not have embarked upon the development of nuclear power plants in Florida.

Q. Why is it important to remember the purpose of the rule in evaluating the utility's analysis of the feasibility of completing the power plants?

A. Because there are benefits to adding nuclear power plants to PEF's system that are not directly addressed by the feasibility analysis suggested by the intervenors. These benefits are, in our view, the reasons the Florida Legislature wanted to encourage utility investment in nuclear power plants in Florida in the first place.

These benefits were also recognized by the Company and the Commission in the Need Determination proceeding and Need Determination Order for Levy Units 1 and 2.

First, the State and the Company value fuel portfolio diversity. No one wants the Company to be too dependent on one source of fuel to produce energy. The LNP will always provide PEF with fuel portfolio diversity, no matter what might change in year-to-year cost and load projections. Fuel portfolio diversity will always be a long term benefit of the LNP.

Second, the addition of the LNP reduces PEF's reliance on fossil fuels for energy production. This will always be true too, no matter what cost and load projections might change from year-to-year. This is another long term benefit of the LNP.

Third, the production of energy from the LNP will always be essentially carbon free energy generation. No matter what the impact of global warming concerns and the attendant legislation and regulation of carbon emissions now and in the future, the LNP will provide essentially carbon-free energy production. That is another valuable, long term LNP benefit.

Finally, no matter what projections might change from year-to-year, the LNP will provide unparalleled base load capacity with a relatively low cost fuel source for PEF and its customers. This will also be a long term LNP benefit.

Whatever a feasibility analysis may show, the importance of these long term benefits of the LNP cannot be ignored or dismissed. These long term benefits are consistent with the legislative policy of this state and the purpose of the nuclear cost recovery statute and rule for these are the reasons to encourage utility investment in nuclear power plants in the first place.

Q. Do you agree that the feasibility analysis that the intervenors propose is appropriate for nuclear power plants?

A. No, I do not. The intervenor witnesses all seem to suggest that the feasibility analysis should be a type of annual cost effective analysis that compares the cumulative present value revenue requirements for the LNP to other generation alternatives based on load, fuel, and emission cost forecast changes each year. Evaluating the changes in these factors annually is more appropriate for generation plants that meet a shorter term need than the base load need that long term nuclear power plants meet. For example, if the Company has a need for power in the next one to four years, this type of analysis is appropriate to assess the most cost effective generation alternative between such units as natural gas-fired or oil-fired Combustion Turbines or natural gas-fired Combined Cycle generation units. These are flexible generation resources with relatively short siting, engineering, and construction periods. With such a short term planning horizon, changes in annual load, fuel, and emission forecasts are relevant to the Company's decision to build such resources.

This is not the type of analysis that should be undertaken annually when the Company has a longer term, base load need that will be met by a long term, base load generation project, such as the LNP. PEF is undertaking the LNP to provide long term, base load generation capacity from the lowest fuel cost and only carbon free generation commercially available to the Company. The Company is not evaluating the decision to move forward with the LNP each year based on a comparison of the annual changes in the projections of capital and operation and maintenance ("O&M") costs, fuel costs, load, and emission costs. These projections can and will change from year to year. Gas price forecasts increase and decrease, emission cost and carbon tax estimates change, and load forecasts can vary from year to year, especially when the economy is in a recession like this year. If the Company applied changes in such forecasts to decide whether to stop or restart the project each year, the Company could never build a nuclear power plant.

Q. Is this just the Company's position in this docket or is this position standard utility resource planning in the industry?

A. No reasonable utility manager will plan to build a nuclear power plant, or any base load generation plant for that matter, using an annual feasibility analysis in the manner suggested by the intervenor witnesses. These are long term, base load projects. They are not planned and built based on changes in cost, fuel, load, and environmental forecasts in a year, two years, or even in a ten-year period of time. These base load generation projects are built with the expectation that they will serve customers for sixty (60) years or more. It is over that time frame that the Company must evaluate capital costs, fuel costs, load, and environmental costs and policy.

Q. Does Jacobs in fact agree with the Company's position that the cost effective analysis he proposes for feasibility cannot be used to make the decision that the LNP is or is not feasible?

A. Yes, he did. Despite asserting in his pre-filed testimony that the Company's feasibility analysis was inadequate because it contained no cost-effective type analysis, Jacobs agreed that the results of such a cost-effective analysis are not determinative of the feasibility of completing the nuclear power plants. In fact, he agreed that even if changes in the fuel, emissions, or other forecasts demonstrated that the nuclear power plant was not cost effective the Commission should not determine that the project should not go forward and the Company should not determine that it is not feasible to go forward with the project. See Exhibit No. ___ (JL-1) (Jacobs Dep. Excerpts, pp. 124-125). He agreed that a nuclear power plant is a long term project that must be evaluated based on the long term, 60 years "or more" benefits to customers. (Id, pp. 125-126.) He also agreed that no utility would evaluate a long term, base load nuclear power plant based on year-to-year changes in forecasts. In fact, as he admitted, if a utility did use annual forecasts to evaluate a long term base load project the utility would never build the nuclear power plant or any other base load generation plant. (Id.).

Q. If the Company believes that feasibility analysis for a base load nuclear plant cannot be a cumulative present value revenue requirements, cost-effective type analysis, why did the Company present a cost effective analysis to support the Levy Units in the Need Determination proceeding?

A. The Company presented that analysis in the Need Determination proceeding because the need determination statute required it. But that statute further required the Commission to determine whether the nuclear power plant will provide "the most cost effective source of power taking into account the need to improve the balance of fuel diversity, reduce Florida's dependence on fuel oil and natural gas, reduce air emission compliance costs, and contribute to the long-term stability and reliability of the electric grid." §403.519(4)(b)3, Fla. Stats. (emphasis supplied). These are the same long-term nuclear power generation benefits that I described above. These benefits cannot be ignored or dismissed in evaluating the feasibility of completing the nuclear power plants. They are consistent with the legislative purpose behind the nuclear cost recovery statute and rule because they are reasons to encourage utility investment in nuclear power plants. The problem is the feasibility analysis proposed by the intervenor witnesses in their pre-filed testimony does ignore these long-term benefits of base load nuclear power generation.

Q. Did the Company prepare an updated cumulative present value revenue requirements analysis in this proceeding similar to what the Company prepared in the Need Determination proceeding?

A. Yes, but only because the Commission Staff asked the Company to answer Staff discovery requesting this analysis from the Company. The Company did not prepare this analysis in the normal course of business and had not prepared it before the Commission Staff asked for it. The Company still considers the analysis inappropriate to determine the feasibility of completing the nuclear power plants.

Q. What does the Company's updated analysis show?

A. The Company's updated cumulative present value revenue requirements analysis demonstrates that the LNP is still cost effective and slightly more cost effective than the analysis in the Need Determination proceeding demonstrated even with the schedule shift to the LNP. The main drivers in this updated analysis are higher long term natural gas price forecasts and increases in the costs of alternative generation resource options that offset some of the cost increase for the LNP. The Company's updated analysis for the LNP was provided in response to Commission Staff's Second Set of Interrogatories to the Company No. 33 and is included as Exhibit No. ___ (JL-2) to my rebuttal testimony. It used the same approach used in the Need Determination proceeding and evaluated the LNP using preliminary project cash flow approximations for a 20 month and a 36 month schedule shift based only on information currently available. The Company used its updated fuel forecasts, emission forecasts with the exception of carbon costs (because the range in the Need Determination proceeding was still considered representative of potential regulatory outcomes), updated alternative generation cost estimates, and updated load and energy forecasts based on the Company's 2009 Ten Year Site Plan. All of the Company-specific updated information was provided based on information used in the normal course of the

Company's utility business and in the same manner used in and approved in the Need Determination proceeding.

As you may recall, the analysis in the Need Determination proceeding showed that the LNP was more cost effective than an all gas generation portfolio in all but one of the mid-fuel and high-fuel, carbon cost impact scenarios. As you may also recall, the Commission and the Company focused on these scenarios because the low fuel and the no carbon cost scenarios were considered highly unlikely. The 80 percent and 50 percent joint ownership scenarios were progressively less cost effective than the 100 percent ownership scenario because the value of the LNP fuel cost savings outweighed the cost sharing under the joint ownership scenarios. The analysis from the Need Determination proceeding is duplicated in Table 1 of Exhibit No. ___ (JL-2) to my rebuttal testimony.

For both the 20 month and the 36 month schedule shift cases, the LNP is more cost effective than an all gas generation portfolio in all of the mid-fuel and high fuel, carbon cost scenarios and more cost effective than the scenarios from the Need Determination proceeding. Additionally, in the base case, the LNP is more cost effective with the 20 month and 36 month schedule shifts in all of the excess capital cost scenarios, with 5 percent, 15 percent, and 25 percent higher costs. This was not the case for the base case scenario in the Need Determination proceeding. Finally, the joint ownership scenarios are again progressively less cost effective than the 100 percent ownership case because the benefits of the LNP fuel savings still outweigh the cost sharing under the joint ownership scenarios. The updated analysis with preliminary, estimated LNP cash flows for a

20 month and 36 month schedule shift, are shown in Tables 2 and 3 in Exhibit No. ___ (JL-2) to my rebuttal testimony, respectively.

Q. What about the intervenors' assertions that the LNP is not cost-effective. Do those assertions undermine the Company's updated analysis?

A. No, they do not. The intervenor witnesses speculate about what an updated cost-effective analysis for the LNP would show but they never address what it actually shows. They were provided this analysis in discovery but apparently fail to or choose not to respond to it. Moreover, the intervenors' approach to natural gas and carbon forecasts is not consistent with the way utilities project such matters. For example, some of the intervenors rely on NYMEX futures prices for long term natural gas forecasts. This is inconsistent with the Company's fuel forecasts that were approved in the Need Determination proceeding and that are routinely reviewed and approved in other proceedings before the Commission. My general understanding of the NYMEX futures prices is that they are indicative only of the spot price that month when the futures price settles. They are not indicative of long term gas prices and in fact the futures price for natural gas the very next year will vary widely each day you review the futures price. This is simply not how utilities forecast natural gas prices. In any event, the intervenor witnesses rely on nothing more than speculation about the cost effectiveness of the LNP. PEF's updated analysis renders their speculation moot.

Q. Since the Company has now performed an updated cost-effective analysis for the LNP with the potential schedule shift impacts, does the Company believe this is an appropriate analysis to use to determine feasibility?

A. No. Even though the Company's updated analysis shows that the LNP is still cost effective using preliminary cash flows for a 20 month and 36 month schedule shift, the Company still believes this is an inappropriate method to assess the feasibility of completing the nuclear power plants for all the reasons that I have already explained.

The intervenors certainly want to use this type of cost effective analysis to claim that the LNP is not feasible. In essence, they argue that PEF's cost recovery, at least for the years 2009 and 2010, should be at risk unless the Company can demonstrate to the Commission's satisfaction that the LNP is "feasible" using this or a similar cost effective type test based on capital cost, fuel cost, load, and emission cost forecasts. To illustrate why this type of cost effective analysis cannot be used in this way, consider what would happen if the Company's updated analysis this year had shown that in every fuel and carbon cost scenario the LNP was not cost effective because of changes in fuel or emission cost forecasts and the intervenors convinced the Commission to open a separate docket to assess the feasibility of the LNP. If by the time that docket went to hearing, updated forecasts demonstrated the LNP was in fact the most cost effective generation alternative, is the Commission supposed to decide feasibility based on the initial forecasts from the Need Determination proceeding, the forecasts the next year demonstrating the LNP was no longer cost effective, the forecasts from the next, subsequent year showing the LNP was again cost effective, or should the Commission wait another year to determine if the LNP is feasible based on the intervenors' proposed cost-effective feasibility analysis?

The intervenors' approach to feasibility is simply unworkable, there is no regulatory certainty if it is employed, and the LNP project cannot be stopped and started while the intervenors argue about feasibility based on changes in forecasts every year that affect the cost effectiveness analysis they propose. The Company's presentation of its prudently incurred actual costs and reasonably incurred estimated and projected costs cannot be held hostage in this way. Even Jacobs agrees that feasibility is forward-looking and has nothing to do with the prudence determination of actual costs, as some of the intervenors argue. See Exhibit No. ___ (JL-2) (Jacobs Dep. Excerpt, pp. 123-124). If the Company knew this was the way the Commission was going to determine feasibility the Company would have never initiated the LNP project. Simply put, the intervenors' feasibility argument discourages, rather than encourages, utility investment in nuclear power plants and it is therefore inconsistent with the purpose of the nuclear cost recovery statute and rule.

Q. How does the Company analyze the feasibility of completing the nuclear power plants?

A. The Company analyzes feasibility in the way Mr. Miller describes in his direct testimony in this docket. The feasibility of completing the nuclear power plants means they are capable of being completed. This does involve technical and legal feasibility, namely, can the AP1000 design be successfully installed on the Levy site and can all legal and regulatory licenses and permits be obtained for the LNP. As Mr. Miller explains in his direct and rebuttal testimony in this docket, there is a reasonable basis to conclude today that the AP1000 design can be successfully installed at the Levy site and that all necessary licenses and permits can be obtained for the LNP.

Q. **Does the Company only consider technical or regulatory feasibility when considering the feasibility of completing the nuclear power plants?**

A. No. The Company does consider the total project cost in this analysis, along with fuel costs, load, environmental regulations and costs, and federal and state legislative and regulatory policy, among other factors. But this is a qualitative analysis, involving the constant monitoring of these factors for fundamental changes that would call into question the continuing feasibility of completing the nuclear power plants. It is not the rote quantitative cost-effective type analysis that the intervenors propose based on year-to-year fluctuations in forecasts and projections.

To explain further, the total project cost for the LNP, for example, certainly can be a factor in determining the capability of completing the nuclear power plants under certain circumstances. But the Company does not have any "magic" number in mind and is not aware of any such "magic" number that is determinative of the capability of completing the nuclear power plants today. Rather, the Company expects the Consortium to behave as a rational business entity in addressing the cost and schedule impacts of the current schedule shift caused by the NRC's LWA determination.

The Company expects that any proposed schedule and cost amendment to the EPC agreement presented by the Consortium will be principled and meaningful under the circumstances. By a principled and meaningful amendment, PEF means that any schedule adjustment and cost increase will be rationally related to the schedule shift that must occur and reasonably supported. The Company will not accept an unprincipled and thus unreasonable cost increase. But the Company has no reason to expect such an unreasonable proposal from the Consortium.

Likewise, the Company will consider such additional factors as fuel costs, load, environmental costs, and federal and state energy policy. The Company constantly monitors such factors on an on-going basis throughout the Company's management of the LNP. But the Company cannot make decisions about the feasibility to complete the nuclear power plants based on temporary fluctuations that occur year-to-year in the forecasts or projections for these additional factors. Rather, the Company monitors these additional factors, and others, for fundamental changes in them that would require the Company to reconsider its decision that completion of the Levy nuclear power plants is feasible.

For example, the repeal by the Florida Legislature of the nuclear cost recovery statute, while not expected, would be such a fundamental change in state policy that the Company would have to evaluate the feasibility of completing the nuclear power plants in light of that change. Also, and again unlikely today, if there was a fundamental change in the federal energy policy which indicated there would no be any greenhouse gas regulation on the horizon the Company would have to take that change into account in its feasibility analysis. But, as these examples demonstrate, these are fundamental changes in these factors that affect the long term benefits of nuclear power generation in the State. They are not temporary, year-to-year fluctuations in forecasts and projections. The Company cannot stop and start the LNP based on such temporary fluctuations. If the Company did focus its feasibility analysis on such temporary fluctuations, the Company would never build the nuclear power plants.

Q. Are there other potential factors that the Company may review to assess the feasibility of completing the nuclear power plants?

A. Under certain circumstances there may be. For example, force majeure events may determine the feasibility of completing the plants if such an unforeseeable Act of God event were to occur and affect completion of the plant. Similarly, a critical path supply failure, such as the closure of the Japan Steel Works forging facility could be an event that affects the feasibility of completing the plants. Likewise, if there is a substantial project delay that takes the completion of the plant out beyond any reasonable forecast horizon, the Company would have to take that into account in evaluating the feasibility of completing the nuclear power plants. Also, if there were some event that precluded the Company from reasonably financing the nuclear power plants at all the Company would have to factor that event into its analysis of the feasibility of completing the plant. But none of these events are reasonably expected to occur.

Q. If the Company expects a revised cost proposal from the Consortium soon why doesn't the Company stop spending money and wait until it knows what the new total estimated LNP cost is?

A. The Company cannot stop and start the LNP project. Stopping the project entirely will only lead to further delay, a disorderly and inefficient management of the project, and resulting higher costs to PEF and its customers. That is not in the best interests of the Company or its customers. Rather, the reasonable steps to take are what the Company has done. The Company has implemented the orderly, known procedures in the EPC agreement to suspend the work, reduce spending for only those items that must be incurred, preserve the benefits of that work, and obtain information to determine the appropriate schedule shift and resulting revised project cost. The Company firmly believes these are the right steps to take and that the Company is taking reasonable and prudent actions.

V. CONCLUSION.

Q. Does this conclude your rebuttal testimony?

A. Yes.

IN THE MATTER OF

In Re: Nuclear Power Plant Cost Recovery Clause

Transcript of Deposition of

William R. Jacobs, Jr., Ph. D.

Volume I
On July 27, 2009

CONFIDENTIAL TRANSCRIPT

Reported by Elizabeth R. Hollingworth
Certified Court Reporter

DR

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Nuclear Power Plant Cost Recovery Clause — Docket No. 090009-EI

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Deposition of WILLIAM R. JACOBS, JR., Ph.D.,
Taken by J. MICHAEL WALLS,

Before Elizabeth R. Hollingsworth,
Certified Court Reporter,

At the Offices of GDS Associates, Inc.,
Marietta, Georgia,

On Monday, July 27, 2009,
Beginning at 9:04 a.m. and ending at 2:28 p.m.

\- - -

CONFIDENTIAL

July 27, 2009

9:04 a.m.

(Whereupon the reporter provided a written disclosure to all counsel pursuant to OCGA 9-11-28.)

MR. WALLS: I think Al Taylor is the only one on the phone that is bound by a confidentiality agreement. If you could confirm that, Al, so we could start.

MR. TAYLOR: That is correct.

WILLIAM R. JACOBS, JR., Ph.D.,

being first duly sworn, was examined and testified as follows:

CROSS-EXAMINATION

BY MR. WALLS:

Q Dr. Jacobs, I'm going to begin your deposition testimony, and I want to make sure first that you had a chance to review the notice and the requested documents attached to it.

A Yes, I did.

Q And did you bring documents with you in response to that request?

A Yes. I brought the -- well, I brought several documents, one of the documents that we downloaded off the NRC Web site related to these

He has many years' experience. He was the vice president in charge of construction of a nuclear project and has worked in the nuclear field for many, many years.

Q Now, I believe you also brought with you and produced some documents that you downloaded from the NRC Web site; is that correct?

A That's correct.

Q Besides the documents in discovery and the NRC documents that you downloaded from the Web site, were there any other documents that you reviewed in this matter in connection with your opinions in this case?

A No.

Q Did you review the EPC?

A I did not review the EPC.

Q Did Mr. McGaughy review the EPC?

A No.

Q Did Mr. Cook review the EPC?

A No.

Q Why not?

A I guess one reason is that it was in Tallahassee. It was restricted, and it was difficult to get down there to review. The other advisor to them for the start-up in the first year of operation for the Kori-1 Nuclear project. So I was essentially an advisor to the plant manager of the Kori-1 during the first year of operation.

Q And when was that?

A That was 1977 through '79.

Q Have you ever negotiated an engineering procurement and construction contract for a nuclear power plant?

A Not for a nuclear power plant. I have negotiated the EPC contracts but not for a nuclear plant.

Q Have you ever negotiated an engineering and procurement contract for a nuclear power plant?

A No, I have not.

Q Have you ever managed the application process for a new nuclear power plant at the Nuclear Regulatory Commission?

A No, I have not.

Q Now, in preparing your testimony in the nuclear cost recovery docket, we discussed what you reviewed. And one thing you didn't mention was the Nuclear Cost Recovery Statute.

[redacted]

MR. REHWINKEL: I'm going to object to the question. I think it mischaracterizes his testimony.

You can answer it.

[redacted]

[redacted]

Q Have you ever negotiated with Westinghouse?

A No.

Q What about Shaw? Have you ever negotiated with them?

A No.

Q I'm going to another topic if you want another break. Or if you're okay, I'll go on.

A Let's go on.

Q Now, Mr. Jacobs, do you know what an LWA is?

A I believe I do, yes.

Q What is it?

A It's a Limited Work Authorization.

Q And what does that mean?

A It's an authorization to perform a certain limited scope of work prior to receiving a COL.

Q And what is a COL?

A COL is a combined license. Some people mistakenly say combined operating license, but it stands for a combined license, that authorizes the licensee to construct, test, and operate the nuclear power plant assuming that all the tests and requirements, called ITACS, during construction and the start-up permit.

Q And so you would agree with me that the purpose of an LWA is to perform certain work before the COL is issued; correct?

A That's correct.

Q And who issues an LWA?

A The Nuclear Regulatory Commission.

Q And is that LWA authorized by the NRC rule?

A Yes, I believe it is.

Q Do you know when that rule was last amended?

A I do not.

Q Would it surprise you to learn that it was last amended in 2007?

A No. I believe that rings a bell when you bring that up. I believe that's correct.

Q Did you go back and review the amendment process and the comments that were made in that process with respect to amending the LWA in 2007?

A No, I did not.

Q By the way, in deciding to amend a rule, in going through that process, the NRC expends considerable resources in doing that;

correct?

A Yes.

Q Would you agree with me that the NRC would not spend those resources to amend a rule that the NRC never intended to use?

A I agree with that. In fact, I have used it.

Q And you would agree with me that the existence of the rule, the LWA rule, was an indication to utilities that LWAs could be granted on new nuclear projects; correct?

A Yes, ones about to be granted.

Q What do you mean by that?

A The LWA for the Vogtle units is soon to be granted.

Q And how do you know that?

A I was at a meeting last week with the Georgia Power, Southern Nuclear individuals. They provided the date that the NRC told them they anticipated on granting the LWA requested for Vogtle 3 and 4.

Q Have you seen any information from NRC reflecting that?

A No.

Q So you're just taking the utilities'

in this COLA are going to questions about applying that design to the site?

A That's correct.

Q And that necessarily involves geotechnical issues, doesn't it?

A Of course, yes.

Q Now, on page nine, lines four through nine of your testimony, you reference the January 23, 2009 conference call between the NRC and PEF; correct?

A Yes.

Q And there you indicate that PEF was communicating that the NRC had told them that the LWA has requested and COLA geotechnical scope require the same critical path duration, and they do not have the resources to process an LWA; correct?

A Yes.

Q Would you agree with me that the NRC decision to review an LWA on the same schedule as the entire COLA will mean that there will be no LWA before the COL?

A That's what it means to me.

Q And would you also agree with me that before you prepared your testimony in this case, A That's correct.

Q And, for example, the NRC did not say this requested timeline but not the LWA; correct?

A They did not say that.

Q And by the way, in this letter of October 6th, 2008, NRC does not say what they communicated to the company on January 23, 2009, that the LWA as requested and COLA geotechnical scope require the same critical path duration, and they do not have the resources to process an LWA?

A They did not say that, no.

Q And, in fact, did you find anyplace prior to January 23, 2009, in any company document or NRC document where the NRC made that exact statement in January 23, 2009, before that date?

A No.

Q And by the way, if we move back to page eight, lines 13 through 17, you're again quoting the October 6th, 2008 docketing letter?

A Yes. It's cited below that, I believe.

Q And this quote references an earlier statement in the letter; correct?

Q And it's going up to when the decision was issued?

A Well, it's going up to the January 23rd phone call --

Q When NRC communicated their --

A -- when they communicated their decision.

Q Can you cite for me an NRC rule, interpretation, or a decision where the NRC says it's required to issue a review schedule within 30 days of docketing the COLA?

A I don't believe it's required. It's just a typical time frame.

Q And the document you had, was that something you looked at to determine, quote, "the typical time frame"?

A No. No. This is just a chronology of NRC correspondence.

Q Can I see that?

A (Witness complies.)

(Whereupon a document was identified as Petitioner's Exhibit 6.)

Q If you could, describe for the court reporter what Exhibit 6 is, please.

A It is a chronology of correspondence

interpretation. I'm not saying that it is 100 percent sure that they wouldn't get it.

Q So then you disagree with his interpretation; correct?

A Okay. I disagree with his interpretation.

Q Can you cite for me an NRC rule, interpretation, or decision where the NRC said it will voluntarily issue a review schedule within 30 days?

A No.

Q Can you cite to me any NRC rule, interpretation, decision, or comment where the NRC has said if the NRC does not issue a review schedule in 30 days after the docketing of the COLA, that the utilities should be concerned with the review schedule?

A No.

Q You claim at page nine, line 14 that the company precipitously changed the project schedule by 20 to 36 months. Do you see that language?

A Yes.

Q What do you mean by precipitously?

A Abruptly.

project, you would look at whether that makes the most sense to go forward with the project given what remains to be spent on the project.

Q Let me ask the question a different way. Would you agree with me that the feasibility analysis that you described --

A Oh, I described several.

Q Well, they're all variations of a cost effectiveness analysis; correct?

A Okay.

Q Would you agree with me that your feasibility analysis which are variations of the cost effective analysis, which you agree involve projections into the future, has nothing to do with the determination of the prudence of the actual costs already incurred on a project?

A Well, that's a different question. Yes, it has nothing to do with the prudence of the costs already incurred.

So, for example, if three years into the project, some fatal flaw in the AP1000 is identified, and it makes the project technically not feasible to go forward, that would have no bearing on the prudence of money spent at that point, but it would have a bearing on what you do going forward.

Q If you could, look at subsection eight, which is the other rule subsection you cite on page 18.

A Okay.

Q Right?

A Yes.

Q It says, quote, "A utility shall, contemporaneously with the filing required by paragraph (5)(c) above, file a detailed statement of project costs sufficient to support a Commission determination of prudence, including, but not limited to, the information required in paragraphs (8)(b) to (8)(e) below"; correct?

A That's correct.

Q And would you agree with me that the determination of prudence then has nothing to do with the determination of feasibility as you just said?

A I would agree with that.

Q Now, I want to talk a bit about this cost effectiveness test that you described. The company did that under the need determination and obtained a need determination for the plant; correct?

A Yes.

Q One year out, assume that the load forecast, the gas forecast, and the emission forecast changes such that if you did your little boxes of the analysis that the LNP would not prove cost effective that year.

Is it your testimony the Commission should determine that the project should not go forward and the company should determine it's not feasible to go forward with the project?

A No.

Q Why not?

A Well, you really have to look at it from the big picture and look at long-term trends. I don't think a one-year change in any condition is sufficient to consider stopping the project.

Q Because this is a long-term project; right?

A That's correct.

Q No one builds a nuclear plant for what's going to happen in the next five years; right?

A That's right. It's a capital-intensive project, and it pays for itself over a lengthy period of time.

Q And, in fact, the company in the need case evaluated that project over 60 years beyond the construction project; correct?

A That would be my guess. I didn't see the need case. But that would be 40 years of the initial license and then 20 years for the license renewal. And some people are now talking even additional license renewal beyond that. So it could last longer than that.

Q And that's the way you should look at a project of that type, right, because that's the period in which that plant will operate; right?

A Yes.

Q So you can't look year to year about changes in gas forecast, for example, and decide not to build a nuclear plant. You wouldn't build one, would you?

A Probably not.

Q You wouldn't build a coal plant on that basis either, would you?

A No.

Q You wouldn't build any long-term nuclear plant on that basis, would you?

A Probably not, no.

Q So it looks like this EPC contract and the project was discussed at each of those board meetings too; right?

A I assume it would be, sure.

Q And you don't know what was discussed at any of those board meetings either, do you?

A No.

Q In fact, the very next sentence says, "He reviewed the status of co-owner negotiations." Do you see that?

A Yes.

Q Doesn't that mean he discussed the joint ownership with the board?

A Yes. But not necessarily that there would be no joint owners signed on prior to the signing with the EPC, which apparently is now his position. I don't know if he has changed his position over time.

Q And you're speculating here; right, Mr. Jacobs?

A I said I don't know.

Q Because you don't know what was discussed?

A I think that's his current position.

Q You do know that he discussed joint

[redacted]

[redacted]

Objective:

In the course of the Florida Public Service Commission's (FPSC) 2009 Nuclear Cost Recovery Clause (NCRC) proceeding, FPSC Staff requested (FPSC Staff's 2nd Interrogatories Question 33) that PEF provide a comparison of an updated life-cycle net present worth assessment with the Company's Levy Need Determination (Levy Need) filing, as listed below.

> 33. Please provide a comparison of the cumulative life-cycle net present worth calculations PEF provided in its LN12 need determination with PEF's updated 2009 assessment. Included in your response the percent changes and briefly describe the causes for such changes.

PEF's System Planning group, which prepares these evaluations for Need Determination proceedings, had not updated the life cycle assessment in the normal course of business at the time this request was received. In order to respond to the FPSC's request, an updated assessment has been performed and is presented herein based on information available at this time. The assessment prepared in response to this request has been performed in a manner consistent with the approach presented in the Levy Need Determination Study (FPSC Docket 080148-EI).

Overview of the Updated Assessment:

In the Levy Need Determination Study, PEF initially established the available potential in-service dates for the new nuclear plants and then developed optimized resource portfolios to accompany the new units during the duration of the projected life of the facility. The remaining resources were selected from natural gas fired simple cycle and combined cycle units to complete each scenario portfolio over the study period. An alternate scenario was also developed based exclusively on natural gas fired generation resources without the nuclear units to develop the All Gas Reference resource portfolio. The same approach was followed in developing the results for this updated assessment.

The optimizations were performed using the Strategist™ model in the same manner the scenarios were developed in the Levy Need Study based on PEF's forecasts for Load and Energy requirements, fuel prices, emission costs and the development costs for new unit additions. The study period costs were then compared for these two portfolios to project the life cycle savings (or costs) between the portfolio option with the Levy Nuclear additions and the All Gas Reference Plan.

A Summary of Key Assumptions and Key Drivers:

In the Levy Need Determination Study, the key drivers identified in the economic assessment were determined to be the forecasted costs of fuel, the potential impact of carbon policy and the projected capital cost for new nuclear units and the natural gas generation alternatives. PEF's Levy Need filing addressed the relative impacts of each of these drivers in the study results by comparing the cumulative present value of system revenue requirements (CPVRR) for each sensitivity applied to the Levy Nuclear Plan versus the All Gas Reference Plan. This approach provides a comparable comparison of life cycle cost between alternatives being considered. Forecasts and adjustments included in this updated assessment are summarized below:

Fuel Forecasts: This assessment was performed with the long term planning fuel forecasts which were updated in mid-May in this year's normal planning cycle.

Fuel Sensitivities: The fuel sensitivities presented in the Levy Need included low, mid reference and high fuel. These sensitivities were repeated in this updated assessment using PEF's updated fuel forecast sensitivities based on the new fuel forecasts.

Emission Forecasts: This assessment was performed with the long term planning emissions forecasts which were updated in mid-May in this year's normal planning cycle. The carbon policy scenarios utilized are based on the sensitivities used in the Levy Need and include potential CO2 cost impacts for No Carbon, Bingaman Specter, EPA No CCS, MIT Mid and CRA Lieberman Warner. While there are evolving policy developments at the state and national levels, these forecasts are still deemed to be a reasonable characterization of potential outcomes and, as such, have been used for this updated assessment.

Commercial In-Service and Cost Projection Updates for the Levy Project: PEF and the WEC/Shaw consortium are still in discussions regarding the implications of the schedule shift. In order to respond to the FPSC Staff Request, the Nuclear Project Development (NPD) team was asked to provide preliminary project cash flow approximations for a 20 month and a 36 month schedule shift based on the information they have available. This assessment was performed with the information that is currently available for potential project cost based on these two projected in-service dates.

Cost Projections for New Unit Additions: This assessment was performed with long term planning project cost estimates for new peaking and combined cycle generation resource options which were updated this year during the regular planning cycle.

Capital Cost Sensitivities: The sensitivities included in the Levy Need reflected changes in projected capital costs for all new resources ranging from -5% to 5%, 15% and 25%. The same cases are included in the updated assessment with the addition of a -15% sensitivity included to reflect changing economic conditions.

Load and Energy Forecast: This assessment was performed using the long term planning Load and Energy forecast that was used in preparing PEF's 2009 Ten Year Site Plan (TYSP'09).

Nuclear Joint Ownership: In the Levy Need, results comparisons were presented for the Levy Nuclear Plan assuming that PEF owned either 100% or 80% of Levy 1 & 2 which entered commercial service in 2016 and 2017 respectively. In response to FPSC Staff requests, PEF provided results summarized for a 50% ownership sensitivity as well. In this updated assessment, PEF is presenting results for ownership sensitivities of 100%, 80% and 50% in a manner consistent with the Levy Need filing.

Summary Results Overview:

In the Levy Need Determination Study, PEF provided tabular summaries of the economic assessment results (ref Table 1). The results tables represent the benefit (cost) of the life cycle cost comparisons of the Levy Nuclear Plan versus the All Gas Reference Plan based on CPVRR for each of the sensitivities addressed. The updated assessment results have been summarized and tabulated in the same manner in Tables 2 and 3.

Table 1 provides an overview of the results originally presented in the Levy Need.

Table 2 provides an overview of the updated results based on PEF's preliminary estimates surrounding a potential 20 month schedule shift for commercial operations of Levy 1 & 2.

Table 3 provides an overview of the updated results based on PEF's preliminary estimates surrounding a potential 36 month schedule shift for commercial operations of Levy 1 & 2.

Table 4 provides a tabular summary of the percentage changes, as requested in the FPSC Interrogatory referenced herein. The summary provides a relative comparison of the CPVRR values obtained in the updated assessment for a potential 20 month LNP schedule shift versus the CPVRR values presented in the Levy Need.

Table 5 provides a tabular summary of the percentage changes, as requested in the FPSC Interrogatory referenced herein. The summary provides a relative comparison of the CPVRR values obtained in the updated assessment for a potential 36 month LNP schedule shift versus the CPVRR values presented in the Levy Need.

Observations:

In comparing results for this updated assessment with the Levy Need, these observations are noted:

Mid Reference Fuel Forecasts: The fossil fuel price forecasts (e.g. natural gas, coal and oil) used in the updated assessment are generally higher than the forecasts used in the Levy Need. The updated nuclear fuel forecast received a slight upward adjustment, but is largely the same as the forecast used in the Levy Need. The updated projections reflect the changes in fuel market conditions over time and are based on the most current long term fuel forecasts available to PEF. Higher forecasted fossil fuel prices tend to increase the life cycle costs projected for the All Gas resource portfolio more than the life cycle costs projected for the Levy Nuclear resource portfolio which provides more favorable results for the Levy Nuclear option. The fuel forecast updates appear to be the predominant driver in the changes in results between these assessments.

Fuel Forecast Sensitivities: The low and high fuel sensitivities presented in the Levy Need and the updated assessment are based on PEF's standard methodology for low and high confidence intervals. The fuel prices in the updated *low* sensitivity forecast are generally lower than the comparable values in the Levy Need. As a result, the projected CPVRR differentials are lower for the *low* fuel forecast sensitivity in the updated assessment. The fuel prices in the updated *high* sensitivity forecast are generally higher than the comparable values in the Levy Need. As a result, the projected CPVRR differentials are higher for the *high* fuel sensitivity in the updated assessment.

Emission Forecasts: The emission forecasts for SO_2, NO_X and Hg were updated in this assessment, but the differentials resulting from the changes appear to be negligible. The projections for the impacts of carbon policy remained the same for the updated assessment. As a result, the changes in CPVRR differentials due to carbon policy appear to be nominal and the sensitivity results appear to be comparable in both assessments.

Commercial In-Service and Cost Projection Updates for the Levy Project: As discussed previously, the updated assessment was performed with information for projected project cost changes based on the two projected in-service dates. The estimates that were provided reflect higher in-service cost approximations for both schedule shift scenarios and, as a result, cause increased life cycle costs for the Levy Nuclear resource portfolio.

Cost Projections for New Natural Gas Fired Unit Additions: As discussed, the updated assessment was performed with adjusted long term planning project cost estimates for new peaking and combined cycle generation resource options. The updated cost projections for natural gas fired generation are generally higher than the projections in the Levy Need which provides upward pressure on the life cycle costs for both the Levy Nuclear and All Gas resource portfolios being compared (since most of the new generation resources in both portfolios are natural gas additions). The cost increases projected for the natural gas fired units appears to result in a small offset to the increased projected costs of the new nuclear resources when the CPVRR differentials between resource portfolios are compared.

Load and Energy Forecast: The updated assessment was performed using the long term planning Load and Energy forecast that was developed for PEF's 2009 Ten Year Site Plan (TYSP'09) which incorporates some downward adjustments for reduced growth projections. The resource plans were adjusted accordingly to reflect appropriately fewer resource additions. As a result, the forecast adjustments do not appear to have a discernable effect on the CPVRR results.

Nuclear Joint Ownership: The results provided for Ownership sensitivities of 100%, 80% and 50% are directionally similar to the results submitted in the Levy Need. The impact of many of the previously discussed key drivers affect the results in a manner proportional to ownership percentage.

Summary:

PEF has completed the requested updated assessment and comparison of life cycle costs for the Levy Nuclear Project in response to the FPSC Staff's (FPSC) 2nd Interrogatories Question 33 in the 2009 Nuclear Cost Recovery Clause (NCRC) proceeding. The results of the updated assessment and comparison with the results filed in the Levy Need have been presented in this Summary Report. The projected benefits of development of the Levy Nuclear Project are somewhat higher in this updated assessment when compared with the results presented in the Need filing.

TABLE 1

Summary of Results Presented in the Levy Need Determination (Docket 080148-EI)

Levy Need Economic Results Summary Table (2016/2017 In Service)

Fuel Sensitivities ***CapEx Sensitivities***

2/21/08 Results - 100% Ownership, 2016 COD Levy Case Versus All Gas CPVRR $Million ($2007)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($6,416)	($2,888)	$2,635
Bingaman Specter CO2	($3,834)	($343)	$5,212
EPA No CCS	($2,684)	$793	$6,318
MIT Mid CO2	$85	$3,614	$9,077
Lieberman Warner CO2	$2,930	$6,380	$11,892

Mid Fuel Reference Case	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%
No CO2	($2,365)	($2,888)	($3,400)	($4,434)	($5,469)
Bingaman Specter CO2	$109	($343)	($926)	($1,960)	($2,995)
EPA No CCS	$1,207	$793	$172	($862)	($1,897)
MIT Mid CO2	$3,975	$3,614	$2,940	$1,906	$871
Lieberman Warner CO2	$6,674	$6,380	$5,640	$4,605	$3,571

2/21/08 Results - 80% Ownership, 2016 COD Levy Case Versus All Gas CPVRR $Million ($2007)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($5,566)	($2,725)	$1,732
Bingaman Specter CO2	($3,530)	($733)	$3,756
EPA No CCS	($2,619)	$171	$4,631
MIT Mid CO2	($448)	$2,403	$6,790
Lieberman Warner CO2	$1,799	$4,594	$9,018

Mid Fuel Reference Case	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%
No CO2	($2,284)	($2,725)	($3,154)	($4,023)	($4,892)
Bingaman Specter CO2	($364)	($733)	($1,234)	($2,103)	($2,972)
EPA No CCS	$502	$171	($367)	($1,236)	($2,106)
MIT Mid CO2	$2,681	$2,403	$1,812	$942	$73
Lieberman Warner CO2	$4,805	$4,594	$3,936	$3,067	$2,197

2/21/08 Results - 50% Ownership, 2016 COD Levy Case Versus All Gas CPVRR $Million ($2007)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($4,017)	($2,246)	$523
Bingaman Specter CO2	($2,766)	($963)	$1,783
EPA No CCS	($2,250)	($409)	$2,317
MIT Mid CO2	($1,018)	$908	$3,685
Lieberman Warner CO2	$339	$2,220	$5,139

TABLE 2

Summary of June'09 Updated Results for a 20 Month Schedule Shift

June'09 Preliminary Economic Results Summary Table (20 Month Shift - 2018/2019 In Service)

Fuel Sensitivities ***CapEx Sensitivities***

6/25/09 Results - 100% Ownership, 2018 COD Levy Case Versus All Gas CPVRR $Million ($2009)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($9,733)	($210)	$13,950
Bingaman Specter CO2	($6,856)	$2,648	$16,795
EPA No CCS	($5,648)	$3,845	$17,990
MIT Mid CO2	($2,647)	$6,849	$20,990
Lieberman Warner CO2	$444	$9,972	$24,104

Mid Fuel Reference Case	LNP CapEx (15%)	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%
No CO2	$1,150	$243	($210)	($664)	($1,571)	($2,478)
Bingaman Specter CO2	$4,009	$3,101	$2,648	$2,194	$1,287	$380
EPA No CCS	$5,206	$4,299	$3,845	$3,392	$2,485	$1,577
MIT Mid CO2	$8,210	$7,302	$6,849	$6,395	$5,488	$4,581
Lieberman Warner CO2	$11,332	$10,425	$9,972	$9,518	$8,611	$7,704

6/25/09 Results - 80% Ownership, 2018 COD Levy Case Versus All Gas CPVRR $Million ($2009)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($8,284)	($588)	$10,875
Bingaman Specter CO2	($5,950)	$1,693	$13,132
EPA No CCS	($4,976)	$2,657	$14,079
MIT Mid CO2	($2,559)	$5,086	$16,468
Lieberman Warner CO2	($68)	$7,619	$18,980

Mid Fuel Reference Case	LNP CapEx (15%)	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%
No CO2	$518	($219)	($588)	($956)	($1,694)	($2,431)
Bingaman Specter CO2	$2,798	$2,061	$1,693	$1,324	$587	($150)
EPA No CCS	$3,763	$3,026	$2,657	$2,289	$1,552	$814
MIT Mid CO2	$6,192	$5,455	$5,086	$4,718	$3,981	$3,244
Lieberman Warner CO2	$8,725	$7,988	$7,619	$7,251	$6,514	$5,777

6/25/09 Results - 50% Ownership, 2018 COD Levy Case Versus All Gas CPVRR $Million ($2009)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($5,867)	($1,021)	$6,196
Bingaman Specter CO2	($4,403)	$386	$7,590
EPA No CCS	($3,791)	$985	$8,176
MIT Mid CO2	($2,278)	$2,501	$9,653
Lieberman Warner CO2	($722)	$4,090	$11,212

Mid Fuel Reference Case	LNP CapEx (15%)	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%
No CO2	($335)	($793)	($1,021)	($1,250)	($1,708)	($2,166)
Bingaman Specter CO2	$1,073	$615	$386	$157	($301)	($759)
EPA No CCS	$1,672	$1,214	$985	$756	$299	($159)
MIT Mid CO2	$3,188	$2,730	$2,501	$2,272	$1,814	$1,356
Lieberman Warner CO2	$4,777	$4,319	$4,090	$3,861	$3,403	$2,945

TABLE 3

Summary of June'09 Updated Results for a 36 Month Schedule Shift

June'09 Preliminary Economic Results Summary Table (36 Month Shift - 2019/2020 In Service)

Fuel Sensitivities ***CapEx Sensitivities***

6/25/09 Results - 100% Ownership, 2019 COD Levy Case Versus All Gas CPVRR $Million ($2009)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($9,264)	($283)	$13,164
Bingaman Specter CO2	($6,515)	$2,461	$15,898
EPA No CCS	($5,374)	$3,604	$17,035
MIT Mid CO2	($2,568)	$6,417	$19,855
Lieberman Warner CO2	$427	$9,440	$22,883

Mid Fuel Reference Case	LNP CapEx (15%)	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%
No CO2	$980	$138	($283)	($704)	($1,546)	($2,387)
Bingaman Specter CO2	$3,724	$2,882	$2,461	$2,040	$1,198	$356
EPA No CCS	$4,866	$4,025	$3,604	$3,183	$2,341	$1,499
MIT Mid CO2	$7,680	$6,838	$6,417	$5,996	$5,154	$4,312
Lieberman Warner CO2	$10,703	$9,861	$9,440	$9,019	$8,177	$7,336

6/25/09 Results - 80% Ownership, 2019 COD Levy Case Versus All Gas CPVRR $Million ($2009)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($7,885)	($640)	$10,219
Bingaman Specter CO2	($5,660)	$1,547	$12,387
EPA No CCS	($4,741)	$2,465	$13,290
MIT Mid CO2	($2,488)	$4,738	$15,534
Lieberman Warner CO2	($79)	$7,183	$17,971

Mid Fuel Reference Case	LNP CapEx (15%)	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%
No CO2	$384	($299)	($640)	($981)	($1,663)	($2,346)
Bingaman Specter CO2	$2,571	$1,888	$1,547	$1,206	$524	($159)
EPA No CCS	$3,489	$2,807	$2,465	$2,124	$1,442	$759
MIT Mid CO2	$5,761	$5,079	$4,738	$4,396	$3,714	$3,032
Lieberman Warner CO2	$8,206	$7,524	$7,183	$6,841	$6,159	$5,477

6/25/09 Results - 50% Ownership, 2019 COD Levy Case Versus All Gas CPVRR $Million ($2009)

Base Capital Reference Case	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference
No CO2	($5,724)	($1,176)	$5,651
Bingaman Specter CO2	($4,332)	$177	$6,991
EPA No CCS	($3,757)	$750	$7,549
MIT Mid CO2	($2,352)	$2,166	$8,934
Lieberman Warner CO2	($845)	$3,700	$10,456

Mid Fuel Reference Case	LNP CapEx (15%)	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%
No CO2	($531)	($961)	($1,176)	($1,390)	($1,820)	($2,249)
Bingaman Specter CO2	$821	$392	$177	($38)	($467)	($897)
EPA No CCS	$1,395	$965	$750	$536	$106	($323)
MIT Mid CO2	$2,810	$2,381	$2,166	$1,951	$1,522	$1,092
Lieberman Warner CO2	$4,345	$3,915	$3,700	$3,486	$3,056	$2,627

Table 4

PEF Levy Nuclear Project June'09 $CPVRR Results Comparison
Levy Need Results *versus* June'09 Updated Results for a 20 Month Schedule Shift
Tabular Summary of the Percentage Changes

	Levy Nuclear Project - Need Basis			Levy Nuclear Project Update Summary - 20 Months				
Sensitivities	**CPVRR ($M)**	**CPVRR ($M)**	**CPVRR ($M)**	**CPVRR ($M)**	**Need % Diff [2]**	**CPVRR ($M)**	**Need % Diff [2]**	**CPVRR ($M)**
	LNP 100%	**All Gas**	**Diff**	**LNP 100% 20 Month**		**All Gas**		**Diff**
Low Fuel	89,314	82,897	(6,416)	82,927	-7%	73,194	-12%	(9,733)
Mid Reference Fuel	100,907	98,019	(2,888)	111,774	11%	111,563	14%	(210)
High Fuel	117,252	119,887	2,635	151,496	29%	165,446	38%	13,950
				108,799	NA	109,950	NA	1,150
CapEx -5% [1]	100,015	97,650	(2,365)	110,782	11%	111,025	14%	243
CapEx +5% [1]	101,799	98,400	(3,400)	112,765	11%	112,101	14%	(664)
CapEx +15% [1]	103,583	99,149	(4,434)	114,748	11%	113,177	14%	(1,571)
CapEx +25% [1]	105,367	99,898	(5,469)	116,731	11%	114,253	14%	(2,478)
Bingaman Specter [1]	113,649	113,306	(343)	122,339	8%	124,987	10%	2,648
EPA No CCS [1]	117,853	118,646	793	125,302	6%	129,148	9%	3,846
MIT Mid [1]	132,353	135,967	3,614	137,759	4%	144,607	6%	6,849
CRA Lieberman Warner [1]	141,222	147,603	6,380	143,233	1%	153,205	4%	9,972
	LNP 80%	**All Gas**	**Diff**	**LNP 80% 20 Month**		**All Gas**		**Diff**
Low Fuel	88,463	82,897	(5,566)	81,478	-8%	73,194	-12%	(8,284)
Mid Reference Fuel	100,744	98,019	(2,725)	112,151	11%	111,563	14%	(588)
High Fuel	118,155	119,887	1,732	154,572	31%	165,446	38%	10,875
				109,432	NA	109,950	NA	518
CapEx -5% [1]	99,934	97,650	(2,284)	111,245	11%	111,025	14%	(219)
CapEx +5% [1]	101,553	98,400	(3,154)	113,058	11%	112,101	14%	(956)
CapEx +15% [1]	103,172	99,149	(4,023)	114,871	11%	113,177	14%	(1,694)
CapEx +25% [1]	104,791	99,898	(4,892)	116,683	11%	114,253	14%	(2,431)
Bingaman Specter [1]	114,039	113,306	(733)	123,294	8%	124,987	10%	1,693
EPA No CCS [1]	118,475	118,646	171	126,490	7%	129,148	9%	2,657
MIT Mid [1]	133,564	135,967	2,403	139,521	4%	144,607	6%	5,086
CRA Lieberman Warner [1]	143,008	147,603	4,594	145,585	2%	153,205	4%	7,619
	LNP 50%	**All Gas**	**Diff**	**LNP 50% 20 Month**		**All Gas**		**Diff**
Low Fuel	86,915	82,897	(4,017)	79,061	-9%	73,194	-12%	(5,867)
Mid Reference Fuel	100,265	98,019	(2,246)	112,585	12%	111,563	14%	(1,021)
High Fuel	119,364	119,887	523	159,250	33%	165,446	38%	6,196
				110,284	NA	109,950	NA	(335)
CapEx -5% [1]				111,818	NA	111,025	NA	(793)
CapEx +5% [1]				113,352	NA	112,101	NA	(1,250)
CapEx +15% [1]				114,885	NA	113,177	NA	(1,708)
CapEx +25% [1]				116,419	NA	114,253	NA	(2,166)
Bingaman Specter [1]	114,269	113,306	(963)	124,601	9%	124,987	10%	386
EPA No CCS [1]	119,055	118,646	(409)	128,162	8%	129,148	9%	986
MIT Mid [1]	135,059	135,967	908	142,106	5%	144,607	6%	2,501
CRA Lieberman Warner [1]	145,382	147,603	2,221	149,114	3%	153,205	4%	4,090

Note 1: CapEx and CO2 Scenarios referenced to the Mid Reference Fuel cases.
Note 2: As requested, the Need % Differential compares the updated CPVRR value to the Need CPVRR value on a percentage basis. The values listed as "NA" reference values that were not filed in the Need.

Table 5

PEF Levy Nuclear Project June'09 $CPVRR Results Comparison
Levy Need Results *versus* June'09 Updated Results for a 36 Month Schedule Shift
Tabular Summary of the Percentage Changes

	Levy Nuclear Project - Need Basis			Levy Nuclear Project Update Summary - 36 Months				
Sensitivities	CPVRR ($M)	CPVRR ($M)	CPVRR ($M)	CPVRR ($M)	Need % Diff [2]	CPVRR ($M)	Need % Diff [2]	CPVRR ($M)
	LNP 100%	All Gas	Diff	LNP 100% 36 Month		All Gas		Diff
Low Fuel	89,314	82,897	(6,416)	82,458	-8%	73,194	-12%	(9,264)
Mid Reference Fuel	100,907	98,019	(2,888)	111,846	11%	111,563	14%	(283)
High Fuel	117,252	119,887	2,635	152,282	30%	165,446	38%	13,164
				108,970	NA	109,950	NA	980
CapEx -5% [1]	100,015	97,650	(2,365)	110,887	11%	111,025	14%	138
CapEx +5% [1]	101,799	98,400	(3,400)	112,805	11%	112,101	14%	(704)
CapEx +15% [1]	103,583	99,149	(4,434)	114,723	11%	113,177	14%	(1,546)
CapEx +25% [1]	105,367	99,898	(5,469)	116,640	11%	114,253	14%	(2,387)
Bingaman Specter [1]	113,649	113,306	(343)	122,526	8%	124,987	10%	2,461
EPA No CCS [1]	117,853	118,646	793	125,544	7%	129,148	9%	3,604
MIT Mid [1]	132,353	135,967	3,614	138,190	4%	144,607	6%	6,417
CRA Lieberman Warner [1]	141,222	147,603	6,380	143,765	2%	153,205	4%	9,440
	LNP 80%	All Gas	Diff	LNP 80% 36 Month		All Gas		Diff
Low Fuel	88,463	82,897	(5,566)	81,079	-8%	73,194	-12%	(7,885)
Mid Reference Fuel	100,744	98,019	(2,725)	112,203	11%	111,563	14%	(640)
High Fuel	118,155	119,887	1,732	155,227	31%	165,446	38%	10,219
				109,566	NA	109,950	NA	384
CapEx -5% [1]	99,934	97,650	(2,284)	111,324	11%	111,025	14%	(299)
CapEx +5% [1]	101,553	98,400	(3,154)	113,082	11%	112,101	14%	(981)
CapEx +15% [1]	103,172	99,149	(4,023)	114,840	11%	113,177	14%	(1,663)
CapEx +25% [1]	104,791	99,898	(4,892)	116,599	11%	114,253	14%	(2,346)
Bingaman Specter [1]	114,039	113,306	(733)	123,440	8%	124,987	10%	1,547
EPA No CCS [1]	118,475	118,646	171	126,682	7%	129,148	9%	2,465
MIT Mid [1]	133,564	135,967	2,403	139,870	5%	144,607	6%	4,738
CRA Lieberman Warner [1]	143,008	147,603	4,594	146,022	2%	153,205	4%	7,183
	LNP 50%	All Gas	Diff	LNP 50% 36 Month		All Gas		Diff
Low Fuel	86,915	82,897	(4,017)	78,918	-9%	73,194	-12%	(5,724)
Mid Reference Fuel	100,265	98,019	(2,246)	112,739	12%	111,563	14%	(1,176)
High Fuel	119,364	119,887	523	159,795	34%	165,446	38%	5,651
				110,481	NA	109,950	NA	(531)
CapEx -5% [1]				111,986	NA	111,025	NA	(961)
CapEx +5% [1]				113,492	NA	112,101	NA	(1,390)
CapEx +15% [1]				114,997	NA	113,177	NA	(1,820)
CapEx +25% [1]				116,502	NA	114,253	NA	(2,249)
Bingaman Specter [1]	114,269	113,306	(963)	124,810	9%	124,987	10%	177
EPA No CCS [1]	119,055	118,646	(409)	128,397	8%	129,148	9%	750
MIT Mid [1]	135,059	135,967	908	142,442	5%	144,607	6%	2,166
CRA Lieberman Warner [1]	145,382	147,603	2,221	149,504	3%	153,205	4%	3,701

Note 1: CapEx and CO2 Scenarios referenced to the Mid Reference Fuel cases.
Note 2: As requested, the Need % Differential compares the updated CPVRR value to the Need CPVRR value on a percentage basis. The values listed as "NA" reference values that were not filed in the Need.

APPENDIX

Levy Nuclear June'09 Review
Planning and Modeling Assumptions Summary

Prepared 7/2/09 by PEF System Planning

Levy Nuclear June'09 Review
New Plant General Modeling Information

Nuclear Plant Summary Information

	20 Month Shift		36 Month Shoft	
	Levy Nuclear Project	Levy Nuclear Project	Levy Nuclear Project	Levy Nuclear Project
	1st Unit	2nd Unit	1st Unit	2nd Unit
Reference In-Service Year	2018	2019	2019	2020
Projected In-Serice Construction Cost ($000 Before AFUDC)	7,391,249	4,535,842	7,408,285	4,981,757
Projected In Service Transmission Cost ($000 Before AFUDC)	1,920,381	152,706	1,920,381	152,706
Winter Capacity Rating (MW)	1,120	1,120	1,120.00	1,120.00
Summer Capacity Rating (MW)	1,092	1,092	1,092.00	1,092.00
Fixed O&M ($000/yr)- $2009, Escalating Annually at 2%	66,935	46,855	66,935	46,855
Variable O&M ($/MWh) - $2009, Escalating Annually at 2%	2.08	2.08	2.08	2.08
Decom and Dismantlement (D&D) Funding ($000/yr) - $2009 Constant	12,775	12,775	12,775	12,775
Annualized Capital Replacement ($000/yr)	10,000	10,000	10,000	10,000
Planned Outage Rate	3.0%	3.0%	3.0%	3.0%
Average Heat Rate at Maximum (Btu/kWh)	10,505	10,505	10,505	10,505

Gas Fired CC Summary Information

	Generic 2x1F Combined Cycle	Generic 2x1F Combined Cycle	Generic 2x1G Combined Cycle	Generic 2x1G Combined Cycle
	1st Unit	2nd Unit	1st Unit	2nd Unit
Reference In-Service Year	2013	2013	2013	2013
Projected In-Serice Construction Cost ($000 Before AFUDC)	730,322	614,920	893,348	761,685
Projected In Service Transmission Cost ($000 Before AFUDC)	112,551	225,102	112,551	225,102
Winter Capacity Rating (MW)	668	668	875	875
Summer Capacity Rating (MW)	610	610	767	767
Fixed O&M ($000/yr)- $2009, Escalating Annually at 2%	4,937	1,310	5,022	2,089
Variable O&M ($/MWh) - $2009, Escalating Annually at 2%	3.21	3.21	3.33	3.33
Pipeline Reservation Charges ($000/yr) - *$2009, Remains Constant*	40,929	40,929	51,742	51,742
Planned Outage Rate	12.8%	12.8%	12.8%	12.8%
Average Heat Rate at Maximum (Btu/kWh)	6,914	6,914	6,710	6,710

Gas Fired Peaker Summary Information

	Generic F Frame Simple Cycle	Generic F Frame Simple Cycle
	1st Unit	2nd Unit
Reference In-Service Year	2012	2012
Projected In-Serice Construction Cost ($000 Before AFUDC)	164,534	112,689
Projected In Service Transmission Cost ($000 Before AFUDC)	43,709	27,318
Winter Capacity Rating (MW)	205	205
Summer Capacity Rating (MW)	178	178
Fixed O&M ($000/yr)- $2009, Escalating Annually at 3%	1,757	672
Variable O&M ($/MWh) - $2009, Escalating Annually at 3%	12.79	12.79
Pipeline Reservation Charges ($000/yr) - *$2009, Remains Constant*	12,352	12,352
Planned Outage Rate	3.97%	3.97%
Average Heat Rate at Maximum (Btu/kWh)	10,359	10,359

Levy Nuclear June'09 Review

Strategist Input Assumptions - Emission Cost Estimates

	1 SO2 $/ton	2 NOX $/ton	5 Hg $/oz	EBS CO2 $/ton	EPA CO2 $/ton	MIT CO2 $/ton	Lieberman Warner CO2 $/ton
2009	61	1,650	-	-	-	-	-
2010	64	1,275	1,254	-	-	-	-
2011	476	2,977	1,358	-	-	35	-
2012	716	2,670	1,464	12	-	38	-
2013	600	2,667	1,572	13	-	41	-
2014	476	3,285	1,684	14	-	43	-
2015	333	3,251	1,798	15	22	46	60
2016	173	3,699	1,940	16	24	50	64
2017	157	3,500	2,088	17	26	53	68
2018	146	3,411	2,239	18	28	56	72
2019	134	3,320	2,395	20	30	60	76
2020	120	3,229	2,556	21	32	63	80
2021	105	3,249	2,614	23	34	68	86
2022	75	3,256	2,673	24	37	72	93
2023	59	3,262	2,733	26	39	77	99
2024	50	3,268	2,794	28	41	81	106
2025	23	3,274	2,857	30	44	86	112
2026	23	3,279	2,921	32	48	92	121
2027	23	3,285	2,987	34	52	98	131
2028	23	3,306	3,054	37	56	104	140
2029	23	3,326	3,123	39	59	111	149
2030	23	3,347	3,193	42	63	117	158
2031	23	3,368	3,265	45	69	125	173
2032	23	3,389	3,339	49	74	133	188
2033	23	3,410	3,414	52	79	141	203
2034	23	3,432	3,491	56	85	150	218
2035	23	3,453	3,569	60	90	159	233
2036	23	3,474	3,649	64	98	170	251
2037	23	3,496	3,732	69	106	181	269
2038	23	3,518	3,816	74	113	192	287
2039	23	3,540	3,901	79	121	203	305

Levy Nuclear June'09 Review

Strategist Fuel Forecasts - Nuclear Fuel Table

	20 Month Delay				36 Month Delay		
	Low, Mid & High				Low, Mid & High		
	FUEL 4 NUCLEAR	FUEL 35 LNP U1	FUEL 36 LNP U2		FUEL 4 NUCLEAR	FUEL 35 LNP U1	FUEL 36 LNP U2
2009	0.39			2009	0.39		
2010	0.57			2010	0.57		
2011	0.57			2011	0.57		
2012	0.76			2012	0.76		
2013	0.76			2013	0.76		
2014	0.85			2014	0.85		
2015	0.85			2015	0.85		
2016	0.88			2016	0.88		
2017	0.88			2017	0.88		
2018	0.87	0.87		2018	0.87		
2019	0.87	0.87	0.88	2019	0.87	0.88	
2020	0.87	0.83	0.88	2020	0.87	0.88	0.90
2021	0.87	0.81	0.87	2021	0.87	0.85	0.90
2022	0.88	0.80	0.85	2022	0.88	0.83	0.88
2023	0.88	0.81	0.81	2023	0.88	0.81	0.87
2024	0.92	0.83	0.82	2024	0.92	0.83	0.82
2025	0.92	0.85	0.84	2025	0.92	0.85	0.84
2026	0.96	0.86	0.86	2026	0.96	0.86	0.86
2027	0.96	0.88	0.87	2027	0.96	0.88	0.87
2028	1.02	0.90	0.89	2028	1.02	0.90	0.89
2029	1.04	0.92	0.91	2029	1.04	0.92	0.91
2030	1.06	0.93	0.93	2030	1.06	0.93	0.93
2031	1.08	0.95	0.94	2031	1.08	0.95	0.94
2032	1.10	0.97	0.96	2032	1.10	0.97	0.96
2033	1.12	0.99	0.98	2033	1.12	0.99	0.98
2034	1.14	1.01	1.00	2034	1.14	1.01	1.00
2035	1.17	1.03	1.02	2035	1.17	1.03	1.02
2036	1.19	1.05	1.04	2036	1.19	1.05	1.04
2037	1.21	1.07	1.06	2037	1.21	1.07	1.06
2038	1.24	1.09	1.08	2038	1.24	1.09	1.08
2039	1.26	1.12	1.11	2039	1.26	1.12	1.11

Levy Nuclear June'09 Review

Strategist Fuel Forecasts - Mid Reference Fuel Table (1 of 2)

	FUEL 1 COAL 1.8	FUEL 2 COAL1.2A	FUEL 3 COAL1.2B	FUEL 5 COAL 5	FUEL 9 COAL1.2	FUEL 4 NUCLEAR	FUEL 35 LNP U1	FUEL 36 LNP U2	FUEL 7 OIL 1.1
2009	3.14				3.14		See Nuclear Fuel Table		8.67
2010	3.88	3.51	3.27	3.06					10.44
2011	4.08			3.22					11.95
2012	4.24			3.32					12.51
2013	4.40			3.41					12.92
2014	4.62			3.31					13.37
2015	4.79			3.41					13.89
2016	5.00			3.61					14.70
2017	5.26			3.76					15.49
2018	5.48			3.97					16.28
2019	5.70			4.13					17.25
2020	5.94			4.28					18.02
2021	6.11			4.49					18.56
2022	6.31			4.66					19.11
2023	6.54			4.82					19.69
2024	6.79			4.98					20.28
2025	7.03			5.15					20.89
2026	7.28			5.36					21.51
2027	7.52			5.52					22.16
2028	7.78			5.79					22.82
2029	8.02			5.97					23.51
2030	8.30			6.19					24.21
2031	8.58			6.42					24.94
2032	8.87			6.66					25.69
2033	9.17			6.91					26.46
2034	9.49			7.17					27.25
2035	9.81			7.43					28.07
2036	10.14			7.71					28.91
2037	10.49			7.99					29.78
2038	10.85			8.29					30.67
2039	11.22			8.60					31.59

Levy Nuclear June'09 Review

Strategist Fuel Forecasts - Mid Reference Fuel Table (2 of 2)

	FUEL 10 GAS FGTF	FUEL 11 GAS FGTI	FUEL 12 GAS ELBA	FUEL 14 GAS SONI	FUEL 18 GulfFirm	FUEL 19 GAS GLFI	FUEL 27 Dist 0.3	FUEL 28 Dist 0.5	FUEL 29 Dist ULS
2009	5.78	5.78	5.78	5.78	5.78	5.78	12.81	12.52	13.25
2010	7.79	7.79	7.79	7.79	7.79	7.79	14.00	13.66	14.51
2011	8.50	8.50	8.50	8.50	8.50	8.50	15.16	14.74	15.78
2012	7.61	7.61	7.61	7.61	7.61	7.61	17.77	17.48	18.21
2013	7.93	7.93	7.93	7.93	7.93	7.93	18.39	18.10	18.81
2014	8.35	8.35	8.35	8.35	8.35	8.35	19.07	18.80	19.47
2015	8.85	8.85	8.85	8.85	8.85	8.85	20.11	19.85	20.50
2016	9.16	9.16	9.16	9.16	9.16	9.16	21.05	20.79	21.45
2017	9.56	9.56	9.56	9.56	9.56	9.56	21.99	21.73	22.39
2018	9.86	9.86	9.86	9.86	9.86	9.86	22.95	22.69	23.35
2019	10.36	10.36	10.36	10.36	10.36	10.36	24.36	24.10	24.75
2020	10.96	10.96	10.96	10.96	10.96	10.96	25.86	25.61	26.24
2021	11.29	11.29	11.29	11.29	11.29	11.29	26.64	26.37	27.03
2022	11.62	11.62	11.62	11.62	11.62	11.62	27.44	27.17	27.84
2023	11.96	11.96	11.96	11.96	11.96	11.96	28.26	27.98	28.68
2024	12.32	12.32	12.32	12.32	12.32	12.32	29.11	28.82	29.54
2025	12.68	12.68	12.68	12.68	12.68	12.68	29.98	29.68	30.42
2026	13.06	13.06	13.06	13.06	13.06	13.06	30.88	30.58	31.34
2027	13.44	13.44	13.44	13.44	13.44	13.44	31.81	31.49	32.28
2028	13.84	13.84	13.84	13.84	13.84	13.84	32.76	32.44	33.25
2029	14.25	14.25	14.25	14.25	14.25	14.25	33.74	33.41	34.24
2030	14.67	14.67	14.67	14.67	14.67	14.67	34.75	34.41	35.27
2031	15.11	15.11	15.11	15.11	15.11	15.11	35.80	35.45	36.33
2032	15.56	15.56	15.56	15.56	15.56	15.56	36.87	36.51	37.42
2033	16.02	16.02	16.02	16.02	16.02	16.02	37.98	37.60	38.54
2034	16.49	16.49	16.49	16.49	16.49	16.49	39.12	38.73	39.70
2035	16.98	16.98	16.98	16.98	16.98	16.98	40.29	39.90	40.89
2036	17.48	17.48	17.48	17.48	17.48	17.48	41.50	41.09	42.12
2037	18.00	18.00	18.00	18.00	18.00	18.00	42.74	42.33	43.38
2038	18.53	18.53	18.53	18.53	18.53	18.53	44.02	43.60	44.68
2039	19.08	19.08	19.08	19.08	19.08	19.08	45.34	44.90	46.02

Levy Nuclear June'09 Review

Strategist Fuel Forecasts - High Fuel Table (1 of 2)

	FUEL 1 COAL 1.8	FUEL 2 COAL1.2A	FUEL 3 COAL1.2B	FUEL 5 COAL 5	FUEL 9 COAL1.2	FUEL 4 NUCLEAR	FUEL 35 LNP U1	FUEL 36 LNP U2	FUEL 7 OIL 1.1
2009	3.76				3.83	See Nuclear Fuel Table			13.34
2010	5.09	4.50	4.05	4.01					16.96
2011	5.72			4.54					20.13
2012	5.89			4.64					20.96
2013	6.68			5.22					22.09
2014	6.95			4.97					23.29
2015	7.18			5.10					24.61
2016	7.53			5.44					26.47
2017	7.97			5.72					28.31
2018	8.37			6.10					30.16
2019	8.77			6.40					32.38
2020	9.22			6.68					34.24
2021	9.57			7.08					35.68
2022	9.97			7.42					37.15
2023	10.43			7.74					38.65
2024	10.93			8.08					40.20
2025	11.41			8.42					41.78
2026	11.92			8.85					43.41
2027	12.41			9.18					45.07
2028	12.94			9.74					46.79
2029	13.45			10.12					48.54
2030	14.02			10.58					50.41
2031	14.62			11.07					52.34
2032	15.24			11.58					54.35
2033	15.89			12.12					56.44
2034	16.56			12.68					58.61
2035	17.27			13.26					60.86
2036	18.00			13.87					63.20
2037	18.76			14.51					65.63
2038	19.56			15.18					68.15
2039	20.39			15.88					70.77

Levy Nuclear June'09 Review

Strategist Fuel Forecasts - High Fuel Table (2 of 2)

	FUEL 10 GAS FGTF	FUEL 11 GAS FGTI	FUEL 12 GAS ELBA	FUEL 14 GAS SONI	FUEL 18 GulfFirm	FUEL 19 GAS GLFI	FUEL 27 Dist 0.3	FUEL 28 Dist 0.5	FUEL 29 Dist ULS
2009	8.83	8.83	8.83	8.83	8.83	8.832	19.544	19.086	20.23
2010	12.69	12.69	12.69	12.69	12.69	12.686	21.862	21.315	22.68
2011	14.35	14.35	14.35	14.35	14.35	14.345	24.598	23.907	25.63
2012	12.79	12.79	12.79	12.79	12.79	12.787	29.216	28.73	29.95
2013	13.57	13.57	13.57	13.57	13.57	13.572	30.813	30.332	31.53
2014	14.54	14.54	14.54	14.54	14.54	14.536	32.539	32.067	33.25
2015	15.68	15.68	15.68	15.68	15.68	15.676	34.912	34.453	35.60
2016	16.47	16.47	16.47	16.47	16.47	16.469	37.136	36.662	37.85
2017	17.44	17.44	17.44	17.44	17.44	17.442	39.366	38.885	40.09
2018	18.24	18.24	18.24	18.24	18.24	18.237	41.656	41.166	42.39
2019	19.41	19.41	19.41	19.41	19.41	19.413	44.808	44.322	45.54
2020	20.79	20.79	20.79	20.79	20.79	20.791	48.171	47.686	48.90
2021	21.65	21.65	21.65	21.65	21.65	21.65	50.177	49.671	50.94
2022	22.53	22.53	22.53	22.53	22.53	22.529	52.231	51.704	53.02
2023	23.43	23.43	23.43	23.43	23.43	23.431	54.336	53.788	55.16
2024	24.36	24.36	24.36	24.36	24.36	24.355	56.496	55.926	57.35
2025	25.30	25.30	25.30	25.30	25.30	25.303	58.71	58.118	59.60
2026	26.28	26.28	26.28	26.28	26.28	26.276	60.981	60.365	61.90
2027	27.27	27.27	27.27	27.27	27.27	27.273	63.309	62.67	64.27
2028	28.30	28.30	28.30	28.30	28.30	28.296	65.7	65.037	66.70
2029	29.38	29.38	29.38	29.38	29.38	29.3841	68.152	67.465	69.19
2030	30.51	30.51	30.51	30.51	30.51	30.514	70.757	70.044	71.83
2031	31.69	31.69	31.69	31.69	31.69	31.6873	73.462	72.722	74.58
2032	32.91	32.91	32.91	32.91	32.91	32.9058	76.27	75.502	77.43
2033	34.17	34.17	34.17	34.17	34.17	34.1711	79.186	78.388	80.39
2034	35.49	35.49	35.49	35.49	35.49	35.4851	82.213	81.385	83.46
2035	36.85	36.85	36.85	36.85	36.85	36.8496	85.356	84.496	86.65
2036	38.27	38.27	38.27	38.27	38.27	38.2666	88.618	87.726	89.97
2037	39.74	39.74	39.74	39.74	39.74	39.7381	92.006	91.08	93.40
2038	41.27	41.27	41.27	41.27	41.27	41.2661	95.523	94.562	96.98
2039	42.85	42.85	42.85	42.85	42.85	42.8529	99.175	98.177	100.68

Levy Nuclear June'09 Review

Strategist Fuel Forecasts - Low Fuel Table (1 of 2)

	FUEL 1 COAL 1.8	FUEL 2 COAL1.2A	FUEL 3 COAL1.2B	FUEL 5 COAL 5	FUEL 9 COAL1.2	FUEL 4 NUCLEAR	FUEL 35 LNP U1	FUEL 36 LNP U2	FUEL 7 OIL 1.1
2009	2.69				2.60	See Nuclear Fuel Table			5.89
2010	2.88	2.67	2.61	2.31					5.20
2011	2.87			2.26					5.68
2012	2.89			2.23					5.81
2013	2.64			2.01					5.73
2014	2.80			2.01					5.67
2015	2.92			2.08					5.63
2016	3.04			2.18					5.71
2017	3.16			2.25					5.77
2018	3.25			2.33					5.82
2019	3.35			2.39					5.92
2020	3.43			2.45					5.95
2021	3.49			2.52					5.89
2022	3.55			2.57					5.84
2023	3.62			2.62					5.80
2024	3.69			2.66					5.76
2025	3.76			2.71					5.72
2026	3.84			2.77					5.68
2027	3.91			2.81					5.65
2028	3.98			2.89					5.62
2029	4.05			2.94					5.59
2030	4.13			3.00					5.56
2031	4.20			3.06					5.53
2032	4.28			3.12					5.50
2033	4.36			3.18					5.47
2034	4.45			3.24					5.44
2035	4.53			3.31					5.40
2036	4.61			3.37					5.37
2037	4.70			3.44					5.34
2038	4.79			3.51					5.31
2039	4.88			3.58					5.28

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Strategist Fuel Forecasts - Low Fuel Table (2 of 2)

	FUEL 10 GAS FGTF	FUEL 11 GAS FGTI	FUEL 12 GAS ELBA	FUEL 14 GAS SONI	FUEL 18 GulfFirm	FUEL 19 GAS GLFI	FUEL 27 Dist 0.3	FUEL 28 Dist 0.5	FUEL 29 Dist ULS
2009	3.24	3.24	3.24	3.24	3.24	3.24	9.31	9.10	9.64
2010	3.85	3.85	3.85	3.85	3.85	3.85	7.76	7.57	8.03
2011	4.03	4.03	4.03	4.03	4.03	4.03	7.80	7.59	8.12
2012	3.52	3.52	3.52	3.52	3.52	3.52	8.71	8.58	8.91
2013	3.52	3.52	3.52	3.52	3.52	3.52	8.64	8.51	8.82
2014	3.55	3.55	3.55	3.55	3.55	3.55	8.60	8.49	8.77
2015	3.61	3.61	3.61	3.61	3.61	3.61	8.71	8.60	8.86
2016	3.59	3.59	3.59	3.59	3.59	3.59	8.76	8.66	8.92
2017	3.60	3.60	3.60	3.60	3.60	3.60	8.81	8.71	8.96
2018	3.57	3.57	3.57	3.57	3.57	3.57	8.86	8.77	9.00
2019	3.60	3.60	3.60	3.60	3.60	3.60	9.06	8.97	9.19
2020	3.67	3.67	3.67	3.67	3.67	3.67	9.27	9.18	9.39
2021	3.64	3.64	3.64	3.64	3.64	3.64	9.22	9.14	9.35
2022	3.61	3.61	3.61	3.61	3.61	3.61	9.19	9.11	9.32
2023	3.58	3.58	3.58	3.58	3.58	3.58	9.16	9.08	9.29
2024	3.56	3.56	3.56	3.56	3.56	3.56	9.14	9.06	9.27
2025	3.54	3.54	3.54	3.54	3.54	3.54	9.13	9.05	9.25
2026	3.52	3.52	3.52	3.52	3.52	3.52	9.12	9.04	9.24
2027	3.50	3.50	3.50	3.50	3.50	3.50	9.11	9.04	9.24
2028	3.48	3.48	3.48	3.48	3.48	3.48	9.11	9.04	9.23
2029	3.46	3.46	3.46	3.46	3.46	3.46	9.12	9.04	9.24
2030	3.44	3.44	3.44	3.44	3.44	3.44	9.11	9.04	9.23
2031	3.42	3.42	3.42	3.42	3.42	3.42	9.11	9.03	9.23
2032	3.40	3.40	3.40	3.40	3.40	3.40	9.10	9.03	9.22
2033	3.38	3.38	3.38	3.38	3.38	3.38	9.10	9.02	9.22
2034	3.36	3.36	3.36	3.36	3.36	3.36	9.09	9.02	9.21
2035	3.34	3.34	3.34	3.34	3.34	3.34	9.09	9.01	9.21
2036	3.32	3.32	3.32	3.32	3.32	3.32	9.08	9.01	9.20
2037	3.30	3.30	3.30	3.30	3.30	3.30	9.08	9.01	9.19
2038	3.28	3.28	3.28	3.28	3.28	3.28	9.07	9.00	9.19
2039	3.26	3.26	3.26	3.26	3.26	3.26	9.07	9.00	9.18

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Energy Requirements History and Forecasts
Net Energy for Load (GWh)

YEAR	History	Forecast Base
1997	34,605	
1998	37,763	
1999	39,160	
2000	41,242	
2001	40,933	
2002	42,567	
2003	43,911	
2004	45,268	
2005	46,878	
2006	46,041	
2007	47,633	
2008	47,658	
2009		48,556
2010		48,765
2011		49,846
2012		52,485
2013		53,647
2014		52,759
2015		53,118
2016		53,644
2017		54,612
2018		55,614
2019		56,698
2020		57,768
2021		58,602
2022		59,471
2023		60,175
2024		60,948
2025		61,846
2026		62,702
2027		63,558
2028		64,403
2029		65,458
2030		66,357
2031		67,270
2032		68,196
2033		69,137
2034		70,092
2035		71,062
2036		72,047

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Energy Demand History and Forecasts

	Summer Peak Net Firm Demand (MW)		Winter Peak Net Firm Demand (MW)	
YEAR	History[1]	Forecast	History[1]	Forecast
1997	7,786		8,486	
1998	8,367		7,752	
1999	9,039		10,473	
2000	8,916		10,047	
2001	8,847		11,458	
2002	9,426		10,685	
2003	8,886		11,555	
2004	9,589		9,325	
2005	10,356		10,833	
2006	10,153		10,700	
2007	10,938		9,899	
2008	10,593		10,967	
2009		9,884		11,327
2010		9,877		11,400
2011		10,053		11,562
2012		10,402		11,950
2013		10,672		12,289
2014		10,676		12,207
2015		10,896		12,455
2016		11,058		12,667
2017		11,250		12,908
2018		11,436		13,140
2019		11,620		13,370
2020		11,803		13,600
2021		11,989		13,830
2022		12,177		14,067
2023		12,365		14,305
2024		12,556		14,543
2025		12,745		14,782
2026		12,930		15,020
2027		13,114		15,257
2028		13,296		15,492
2029		13,514		15,746
2030		13,711		15,999
2031		13,912		16,256
2032		14,115		16,517
2033		14,322		16,783
2034		14,531		17,052
2035		14,744		17,326
2036		14,959		17,605

Notes: 1: History from Schedule 3 of Ten-year Site Plan

Levy Nuclear June'09 Review
Financial and Economic Assumptions

1 PEF Capitalization Ratios and Projected Cost of Capital

Component	***Ratio***	***Cost***
Debt	50%	5.83%
Preferred	0%	na
Equity	50%	12.54%

2 Projected Discount Rate: 8.100%

3 Projected AFUDC Rate: 8.848%

4 Tax Assumptions

a) Composite Effective Income Tax Rate	37.360%
b) Combined Cycle Book Life	25 Years
Combined Cycle Tax Depreciation Life	20 Years
c) Simple Cycle CT Book Life	25 Years
Simple Cycle CT Tax Depreciation Life	15 Years
d) Nuclear Generation Book Life	40 Years
Nuclear Generation Tax Depreciation Life	15 Years
e) Transmission Book Life	40 Years
Transmission Tax Depreciation Life	15 Years

5 General Inflation Rate 2.00%

6 General Escalation Rate 3.00%