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P R O C E E D I N G S

(Transcript follows in sequence from
Volume 5.)

COMMISSIONER EDGAR: Folks, we're going to get started in just a moment, if you could all gather together again for us. The Chairman has asked that we proceed, and he's going to watch us from above so that he can stretch out his, his back. And he has also asked that I convey that he would like us to try to adhere to the schedule that we have kind of been doing, which is run lunch around 1:00ish to 2:15ish, depending on the natural break, and that we may go to 7:00ish, not the way he put it but the way I put it, to see how far we can get. And so we'll just see how things are going later in the afternoon.

So with that, I would like you to call your next witness.

MR. ROACH: Okay. My name is Ed Roach. Our next witness is Gary Doughty.

GARY R. DOUGHTY

was called as a witness on behalf of Progress Energy Florida and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. ROACH:

1 Q. Mr. Doughty, state your name and work address.

2 A. Gary Robert Doughty, 412 White Columns Way,
3 Wilmington, North Carolina.

4 Q. And by whom are you employed and in what
5 position?

6 A. I'm employed by Janus Management Associates,
7 Incorporated, and I am president.

8 Q. Has your direct testimony of 57 pages and
9 accompanying exhibits been prefiled on March 2nd in this
10 proceeding?

11 A. Yes.

12 Q. Do you have any changes or corrections to your
13 testimony?

14 A. No.

15 Q. If I asked you the same questions today, would
16 you give the same answers?

17 A. Yes.

18 MR. ROACH: I'd like to ask that the prefiled
19 testimony of Mr. Doughty be inserted into the record as
20 if read.

21 COMMISSIONER EDGAR: The prefiled, the
22 prefiled testimony of the witness will be inserted into
23 the record as though read.

24 MR. ROACH: Okay. I'd like to also note that
25 Mr. Doughty has six exhibits which are marked

1 GRD-1 through GRD-6.

2 **COMMISSIONER EDGAR:** Thank you.

3 **MR. ROACH:** Which have been preidentified as
4 Exhibits 91 through 96.

5 (Exhibit 91 through 96 marked for
6 identification.)

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IN RE: NUCLEAR COST RECOVERY CLAUSE**FPSC DOCKET NO. 090009****DIRECT TESTIMONY OF GARY R. DOUGHTY**1 **I. INTRODUCTION AND EXPERIENCE**2 **Q. Please state your name, occupation, and address.**3 A. My name is Gary R. Doughty. I am President of Janus Management
4 Associates, Inc. My business address is 412 White Columns Way,
5 Wilmington, North Carolina 28411.
67 **Q. What is the purpose of your testimony in this proceeding?**8 A. Janus Management Associates, Inc. (Janus) was retained by Progress
9 Energy – Florida (PEF) to review the reasonableness and prudence of
10 project management and project control systems in place to manage the
11 Levy Nuclear Project (LNP). PEF is a subsidiary of Progress Energy, Inc.
12 (PGN). PEF is in the process of seeking a combined operating license
13 and siting approval for two AP1000 Advanced Passive nuclear power
14 plants in Levy County, Florida and the necessary electrical baseload
15 transmission facilities.
1617 **Q. Do you have any exhibits to your testimony?**

1 A. Yes. I have prepared or assembled the following exhibits to my direct
2 testimony:

- 3 • Exhibit No. ____ (GRD-1), Janus Management technical consulting firm
4 services;
- 5 • Exhibit No. ____ (GRD-2), resume of Gary R. Doughty;
- 6 • Exhibit No. ____ (GRD-3), testimony experience in management prudence
7 reviews;
- 8 • Exhibit No. ____ (GRD-4), outage and major capital project experience;
- 9 • Exhibit No. ____ (GRD-5), Key LNP documents reviewed and approved by
10 the Senior Management Committee (SMC); and
- 11 • Exhibit No. ____ (GRD-6), Example contractor oversight reports to
12 management.

13 These exhibits are true and correct.

14

15 **Q. Please state your professional experience and education.**

16 A. Janus is a management and technical consulting firm providing services to
17 the electric utility industry. See Exhibit No. ____ (GRD-1). As president of
18 Janus, I have provided technical support to nuclear utilities through
19 analyses of specific nuclear plant capital construction projects and nuclear
20 plant outage schedule issues. See Exhibit No. ____ (GRD-2). I have led
21 teams that provided support to nuclear utilities in decision analyses for

1 nuclear plant management, nuclear business strategy development, and
2 economic analyses of nuclear plant continued operation versus License
3 Renewal for an additional 20 years of operation or early retirement.

4 I have also served on independent review teams for utility boards of
5 directors, including: (1) Ameren regarding Callaway Nuclear Power Plant
6 performance issues; and (2) Northeast Utilities (NU) as a member of the
7 Fundamental Cause Assessment Team to determine the reason for the
8 decline of Millstone 1, 2, and 3 performance. I was also a member of the
9 Mixed Oxide Fuel Fabrication Facility Independent Review Team for the
10 Shaw / Areva Board of Governors to review project management, project
11 controls and procurement activities of critical materials for the \$4.8 billion
12 facility at the Department of Energy's (DOE) Savannah River Site in South
13 Carolina.

14 Since 1987, I have led comprehensive prudence reviews of nuclear
15 power plant project management, electric transmission project
16 management, corporate decision-making, capital program management,
17 and nuclear plant outage management. I have also performed several
18 focused strategic studies for utility senior management and the Electric
19 Power Research Institute.

20 During late 1986 through 1987, I served as Manager of Industry
21 Relations for the Institute of Nuclear Power Operations (INPO), a private
22 organization dedicated to promoting excellence within the nuclear
23 industry. In this position, I was responsible for administration of INPO's

1 communications, technical policy and informational programs to utility
2 members, suppliers and international participants, related organizations
3 and government agencies.

4 I have extensive experience in the field of nuclear power plant
5 construction and project management. In 1975 to 1977, I was a startup
6 engineer for the owner utility, Northeast Utilities (NU), of the Millstone 2
7 nuclear power plant in Waterford, CT. I was responsible for system
8 testing and acceptance during the construction completion phase for
9 several nuclear safety systems, fire protection systems, auxiliary
10 equipment, and balance-of-plant components. During initial plant startup,
11 I was a shift test engineer for the initial criticality, low-power testing and
12 full-power operational certification.

13 From 1984 to 1986, I was project manager for NU of the Millstone 3
14 nuclear power plant prudence audit ordered by the Connecticut
15 Department of Public Utility Control. The prudence audit reviewed all
16 aspects of the management, engineering, procurement, construction,
17 startup, project controls, regulatory performance and \$4 billion costs of the
18 1150 megawatt (MW) unit.

19 While with NU, I was also Manager of Generation Projects for
20 Millstone 2's program for major capital projects, major repairs and
21 initiatives to respond to new regulatory requirements. During a major
22 outage, I was responsible for management of more than \$100 million of
23 capital and maintenance projects, including removal of the nuclear thermal

1 shield from the reactor and tube sleeving of the steam generators, both
2 first-time projects for the utility. I managed the overall efforts to prolong
3 the life of the Millstone 2 steam generators. I was responsible for
4 developing annual budgets and schedules for capital and major expense
5 projects to meet operational and regulatory commitments, and I served on
6 the Millstone 2 Nuclear Review Board to review safety-related issues.

7 I served as a U.S. Navy Officer in the nuclear submarine force. As
8 an officer in the U.S. Navy nuclear submarine force, I was trained in
9 nuclear reactor engineering concepts and qualified to operate and
10 maintain two naval reactor plants.

11 I have a Bachelor of Engineering degree in Electrical Engineering
12 from Vanderbilt University, and received a MBA from the University of
13 New Haven.

14
15 **Q. Do you have direct experience related to management prudence**
16 **evaluations?**

17 **A.** Yes. I have performed more than 14 independent reviews regarding the
18 prudence of utility management with respect to nuclear power plant and
19 electric transmission project management and project controls. I have
20 submitted testimony related to some of these independent reviews to nine
21 state public utility commissions. These are identified in Exhibit No. ____
22 (GRD-3) to my testimony.

1 I have also performed prudence evaluations of new nuclear power
2 plants, major capital projects at nuclear power plants and fossil-fired
3 plants, and construction of electric transmission facilities. The new
4 nuclear power plants for which prudence evaluations were performed
5 include: Comanche Peak in Texas for the Texas Public Service
6 Commission and Millstone 3 in Connecticut for the Connecticut
7 Department of Public Utility Control. The operating nuclear power plants
8 for which Janus performed independent evaluations of major capital
9 projects and long outages are presented in Exhibit No. ____ (GRD-4).
10 These evaluations do not include the plants already listed in Exhibit No.
11 ____ (GRD-3).

12 From 2005 to early 2009, Janus performed independent
13 evaluations of Northeast Utilities \$3 billion electric transmission
14 infrastructure upgrade. Janus evaluated the siting, design, and
15 construction of electric transmission facilities in Connecticut and
16 Massachusetts. These projects include construction of new 345-kiloVolt
17 (kV) transmission lines in southwest Connecticut, the construction of
18 underground 115-kV and 345-kV lines in southwest Connecticut, the
19 replacement of submarine cables under Long Island Sound, and the siting
20 of transmission lines in Connecticut and Massachusetts.

21
22 **II. PURPOSE AND SUMMARY OF TESTIMONY.**

23 **Q. Please describe the nature of your testimony in these proceedings.**

1 A. This testimony presents my expert opinion with respect to the
2 reasonableness and prudence of PEF's management decision processes
3 and project management and controls as they relate to the LNP.
4

5 **Q. How have you proceeded?**

6 A. I started with the reasonableness or prudence standard which is accepted
7 and utilized throughout the electric utility industry. Next, I reviewed PEF's
8 decisions and processes as they relate to the LNP in terms of the
9 processes used and the knowledge reasonably available to PEF
10 managers. The areas that I reviewed were: (1) Project oversight by the
11 PEF parent board of directors (BOD) and senior management; (2) Project
12 concept and contract strategy; (3) Project management; (4) Project
13 controls; (5) Risk management; (6) Policies and procedures; and (7)
14 Project assessment. I then measured the decisions and processes
15 against the appropriate standard of reasonableness and prudence and
16 arrived at an opinion concerning the reasonableness and prudence of
17 PEF's decisions and processes for the management and control of the
18 LNP.
19

20 **Q. What methods did you use to review PEF's decisions and**
21 **processes?**

1 A. I reviewed the LNP documents such as its policies, procedures,
2 schedules, cost estimates, contracts, progress reports, BOD minutes, risk
3 analyses, management oversight reports, regulatory information, audit
4 reports, benchmarking reports, independent assessments, and quality
5 assurance reports. I reviewed other appropriate PEF and industry
6 information. Finally, I interviewed key personnel involved in the LNP work,
7 including the baseload transmission project, internal audit, project
8 controls, and management.

9
10 **Q. What standard of reasonableness and prudence did you use in your**
11 **assessment?**

12 A. In my experience in the electric utility industry, the general standard of
13 reasonableness or prudence is as follows: Prudence is that standard of
14 care which a reasonable utility manager would be expected to exercise
15 under the same circumstances encountered by utility management at the
16 time decisions had to be made. Importantly, in determining whether a
17 judgment was prudently made, only those facts available at the time the
18 judgment was exercised can be considered. Hindsight review is
19 impermissible. Further, one's own judgment should not be substituted for
20 that of management; the prudence standard recognizes that reasonable
21 persons can have honest differences of opinion and there may be more
22 than one prudent decision under the circumstances.

23

1 **Q. How did you apply this prudence standard to the management and**
2 **project controls for the LNP?**

3 A. I applied the prudence standard to an industry-recognized set of general
4 evaluative criteria for a project of the size and complexity of the LNP.
5 These general evaluative criteria for prudent decisions and project
6 controls are: (1) PEF senior management and the BOD should maintain
7 appropriate involvement, have in place information channels and maintain
8 sufficient oversight to make ongoing critical project decisions; (2) the LNP
9 project concept and contract strategy should provide the degree of control
10 necessary to protect PEF's investment and be consistent with the
11 magnitude of the project; (3) the implementation of the decision to build
12 the LNP should be reasonably planned, organized and controlled by PEF
13 to be able to meet project goals for scope, schedule, budget, regulatory,
14 safety, and quality requirements; (4) the roles and responsibilities of the
15 project team members and the interfaces among the Levy plant and the
16 Levy transmission project team, other PEF functional organizations, the
17 Owner's Engineers and other contractors, and the EPC should be
18 documented and applied; (5) the LNP risk management process should
19 identify risks, track identified risks, and provide management with a logical
20 and coherent framework to evaluate, prioritize, and develop courses of
21 action to mitigate or avoid the major project risks; (6) the LNP should have
22 in place information systems to report costs, schedule progress, and
23 contractor performance; and to detect threats to meeting project scope,

1 budget or schedule; (7) the LNP should have in place policies and
2 procedures that define expectations and accountability for work products,
3 identify responsibilities, and serve as training tools for new staff; and (8)
4 the LNP should have appropriate assessment processes to ensure that
5 regulations, procedures, quality standards, and contractual obligations are
6 met.

7
8 **Q. Please provide a summary of your testimony.**

9 A. In my opinion PEF's LNP project management and project controls are
10 reasonable and prudent. PEF has the requisite processes and
11 organization to manage a project of this magnitude and complexity. PEF
12 has reasonable and effective management practices for this project.
13 Senior management oversight is extensive and the BOD is thoroughly
14 informed and engaged in the project. The project governance policy
15 provides a comprehensive guide for the project with coordinated
16 independent oversight and management.

17 The LNP also has a reasonable project management organization
18 and is appropriately transitioning to the new NPD organization with the
19 execution of the Engineering, Procurement, and Construction Agreement
20 (EPC) with Westinghouse Electric Corporation (WEC) and Shaw, Stone, &
21 Webster (SSW). The EPC contract met the BOD criteria of firm design
22 and clear visibility to costs and it is a reasonable contract that balances

1 risk and PEF control using a combination of fixed price, firm price, target
2 price, and time and materials arrangements.

3 The LNP further has a sophisticated risk management process
4 consistent with industry best practices. There are reasonable project
5 controls in place to develop estimates, monitor schedules, and control
6 contractors. There is reasonable reporting and performance monitoring
7 and the planned expansion of performance indicators will enhance
8 performance monitoring further. Additionally, there is an effective and
9 comprehensive set of existing project management and execution policies
10 and procedures that, following EPC execution, are being supplemented
11 with specific LNP procedures. Finally, there are extensive project reviews,
12 internal audits, benchmarking, self assessments, and quality assessment
13 (QA). All of this demonstrates that the LNP project management and
14 project controls are reasonable and prudent.

15
16 **III. ASSESSMENT OF PEF'S MANAGEMENT PROCESSES AND**
17 **PROJECT CONTROLS FOR THE LNP.**

18 **Q. Please describe the status of the LNP at the time of your**
19 **assessment.**

20 **A.** On August 12, 2008, the FL Public Service Commission (FPSC) issued a
21 Determination of Need for the LNP. The LNP is in the permitting phase
22 with the docketing of the Levy Combined Operating License Application

1 (COLA) with the Nuclear Regulatory Commission (NRC) and the Site
2 Certification Application (SCA) with the Florida Department of
3 Environmental Protection (FDEP). The LNP is being managed as two
4 major projects. The nuclear portion of the LNP is being managed by the
5 Nuclear Plant Development (NPD) department. The NPD department
6 reports to the PEF chief executive officer. The Levy baseload
7 transmission project is being managed by the PGN Generation and
8 Transmission Construction Department (G&TC). The Levy Integrated
9 Nuclear Committee (LINC), which is chaired by the PEF CEO, currently
10 oversees the entire LNP and all support organizations.

11 The LNP submitted the COLA with the NRC on June 30, 2008, and
12 it was docketed October 6, 2008. The SCA was submitted to the FDEP
13 on June 2, 2008. The FDEP Agency Report was completed on January
14 12, 2009, and site certification hearings are currently being held.

15 The LNP is now starting the transition to the site preparation and
16 licensing phase. PEF signed the EPC on December 31, 2008. Owner
17 engineer firms have been engaged for both the Levy nuclear project and
18 the baseload transmission project. The Levy baseload transmission
19 project has begun engineering and design work and is in the process of
20 engaging an acquisition program manager to handle the real estate and
21 right of way activities. The baseload transmission scope is comprised of
22 some 67 sub-projects including lines and substations.

23

1 **Q. How is Senior Management involved in oversight and direction of**
2 **LNP?**

3 A. I determined that senior management involvement is extensive. The
4 levels of senior management have had extensive involvement in planning
5 and managing the LNP. The BOD receives regular updates of key LNP
6 milestones and issues. The BOD will continue to be involved through the
7 formation of an *ad hoc* committee to function as the primary point of
8 contact for BOD oversight. The BOD is therefore informed and provides
9 oversight and direction with respect to LNP matters.

10 Senior management has LNP oversight through several methods
11 including the regular corporate processes of setting the corporate strategy,
12 establishing budgets, and reviewing performance. The SMC reviews and
13 approves the annual project plan, reviews weekly status reports, and
14 conducts the Monthly Business Review process. Senior management
15 also directed the participation in the NuStart Energy Development utility
16 group and formed the Baseload Steering Committee to provide overall
17 project coordination and oversight of new baseload generation projects.
18 Finally, senior management provided oversight of the EPC negotiations
19 and established the Levy Integrated Nuclear Committee (LINC).

20 With the signing of the EPC agreement, an *ad hoc* committee of the
21 BOD was announced to focus on new nuclear construction projects. This
22 committee functions as the primary point of contact for BOD oversight of
23 the projects and includes at least three independent members of the BOD.

1 Among the duties of the committee are to review construction status,
2 schedule adherence and regulatory compliance and reports, recommend
3 BOD approval of major milestones and commitments when necessary,
4 review changing business conditions and emerging issues of potential
5 significant impact, review project leadership, governance, execution and
6 controls for adequacy and effectiveness, conduct or authorize
7 investigations or studies if necessary, and establish a Nuclear Project
8 Advisory Committee comprised of industry experts to advise the
9 Committee on the execution of its functions.

10 The Baseload Steering Committee was established as an
11 appropriate vehicle to coordinate the development of options and
12 necessary steps to consider before construction of baseload generation.
13 The Baseload Steering Committee was led by five members of senior
14 management, including the PEF President, with a supporting team
15 representing key areas of investigation. The Baseload Steering
16 Committee role was to pursue initial project design and implementation,
17 transmission, legal and regulatory approvals, legislative initiatives,
18 financing and communications. The Baseload Steering Committee work
19 culminated in a recommendation to the Board to preserve the option to
20 build nuclear generation and identified Levy County as the preferred site
21 for Florida.

22 The SMC also includes the PEF President and is also involved in
23 LNP management review. The SMC holds Monthly Business Reviews to

1 review project progress and address issues if necessary. It includes multi-
2 functional Company representation to ensure appropriate senior
3 management involvement in the LNP. The SMC reviewed and approved
4 the key LNP documents identified in Exhibit No. ____ (GRD-5).

5 The LINC was established in early 2008 to enable full coordination
6 of planning and pre-construction execution of the LNP. LINC is chaired by
7 the PEF President and CEO and is comprised of cross functional senior
8 leaders in PEF. LINC was established as a single point for management
9 coordination and oversight that supplements direct line organization
10 accountability. LINC's responsibilities include (1) review and approval of
11 all initiatives to implement the LNP; (2) monitoring and assessing ongoing
12 initiatives; (3) assessing risks; (4) allocating resources; (5) documenting
13 key decisions in accordance with project assurance policies and
14 procedures; and (6) reporting to the SMC and Boards as required. LINC
15 is expected to adjust its role as the LNP enters the more complex
16 execution and construction phase when the need is identified.

17
18 **Q. Is the senior management and BOD involvement in the LNP prudent?**

19 **A.** Yes. In my opinion senior management and the BOD maintain a high
20 level of involvement regarding the LNP that is consistent with the
21 magnitude, complexity and importance of the LNP. Senior management
22 has kept the BOD informed of the project status, risk factors, costs, project
23 management, and regulatory processes. The BOD is appropriately

1 involved in approving key decisions. Indeed, a specific subcommittee was
2 established by the BOD to focus on nuclear plant construction. The SMC
3 and the LINC also provide comprehensive oversight of the LNP and
4 ensure management coordination and oversight that supplements direct
5 line organization accountability. Senior management further has
6 reasonably implemented an organizational change to establish the NPD
7 department, which reports directly to the PEF President and provides
8 even more direct senior management oversight of the LNP and realigns
9 the Nuclear Generation Group so that it can focus on the operating
10 nuclear units.

11
12 **IV. ASSESSMENT OF PROJECT CONCEPT AND CONTRACT**
13 **STRATEGY.**

14 **Q. Does the LNP project concept and contract strategy provide a**
15 **prudent degree of control consistent with the magnitude of the LNP?**

16 **A.** Yes. The LNP project concept establishes a formal organization with the
17 responsibility to carry out a major corporate mission through the use of
18 available resources and outside firms. This approach has been in place
19 since the project was conceived in 2005 and is the model for the Nuclear
20 Plant Development department and the Levy Baseload Transmission
21 Project.

22

1 **Q. Please explain the project concept and contract strategy for the Levy**
2 **Nuclear Plant.**

3 A. The initial planning and permitting phase project concept involved the
4 formation of a new department, Nuclear Plant Development and License
5 Renewal (NPD&LR), within the Nuclear Generation Group to develop and
6 obtain federal and state regulatory approval for selected sites. The team
7 included Progress personnel supported by an outside engineering team
8 and specialized consultants. The NPD&LR team managed the regulatory
9 interfaces with state and federal agencies, monitored the performance of
10 supporting engineering firms, reviewed the technical and engineering
11 products, and set the plant selection criteria. The NPD&LR department
12 was led by an experienced nuclear manager with new plant startup
13 experience. It included engineering, licensing and project controls
14 personnel to manage the supporting engineering firms and interface with
15 the NRC, FDEP, and other agencies.

16 The NPD&LR project team developed the Project Plan for New
17 Nuclear Baseload Generation – COL Phase to govern the project. The
18 team assisted in the preparation of the Business Analysis Packages (BAP)
19 and Integrated Project Plan (IPP). The NPD&LR project team managed
20 contractors for the preparation of the COLA, SCA and other federal and
21 state permits through work authorizations and reviewed technical and cost
22 parameters to approve contractor estimates. The NPD&LR department

1 controlled work through contractor reporting requirements, technical
2 reviews, cost reviews and audits.

3 The project concept for the LNP site preparation phase is set by the
4 formation of the NPD and by the EPC agreement. The EPC has elements
5 of fixed price scope, firm price scope, some target price arrangements and
6 some time and materials work. The NPD adds management resources
7 devoted to plant construction oversight, contract administration, and
8 project controls. The primary contract management function is
9 management of the Levy EPC contract. The LNP team selected an owner
10 engineer to provide the engineering function and to assist in technical
11 reviews. The owner engineer is the team of Sargent & Lundy (S&L) and
12 WorleyParsons, which are members of the joint venture that supported the
13 LNP COLA.

14 The primary contract for the LNP is the EPC contract. PEF senior
15 management and the BOD established criteria to select a firm design with
16 clear visibility to costs. The selection of WEC / SSW was designed to
17 achieve the lowest reasonable price with maximum amount of risk sharing
18 and mitigation under prevailing circumstances. Additionally, PEF wanted
19 to provide adequate owner control with visibility into construction and risk
20 management and align WEC / SSW incentives and penalties with the
21 Company's interests.

22 The EPC contract includes various performance incentives,
23 penalties, warranties, liquidated damage provisions and parent

1 guarantees, designed to incent the contractor to perform efficiently. Over
2 half of the contract price is fixed price or firm price with agreed-upon
3 escalation factors. Contract costs are subject to adjustment for change
4 orders.

5 The contract strategies with the Owner's Engineers for the Levy
6 nuclear plant and the Levy Baseload Transmission Project are similar.
7 Both contracts were competitively bid. The contract management
8 approach engages Owners' Engineers and uses a task order approach
9 wherein work is authorized based on a specific scope that is estimated by
10 the owner engineer and reviewed by the respective PEF project team for
11 technical adequacy and cost. Once released for implementation, the work
12 is monitored by PEF technical personnel and administered by the PEF
13 designated contract representative. The owner engineer is required to
14 provide detailed reports of its performance of the work monthly.

15
16 **Q. What is the project concept and contracting strategy for the Levy**
17 **Baseload Transmission Project?**

18 A. The project concept for the Levy Baseload Transmission Project is similar
19 to the NPD focused approach. The initial transmission planning for the
20 LNP generation addition to the PEF transmission system was performed
21 by the TOPD as part of the normal system planning function. PEF
22 recognized the magnitude of the Levy Baseload Transmission Project and
23 formed the project team under the Vice President - G&TC to manage the

1 baseload transmission requirements. The team engaged consultants to
2 assist with the scope definition, identification of the transmission line
3 corridors, the location of substations, project procurement strategy, and
4 major materials market assessment.

5 The Levy baseload transmission team was enlarged to incorporate
6 the additional functions that are necessary for design reviews, project
7 controls, and real estate acquisition. An owner engineer firm was selected
8 to perform engineering and technical reviews. The plan is to engage an
9 acquisition program manager for the substation and transmission line real
10 estate functions including surveying, purchasing the land / rights of way,
11 and legal work. The contracting strategy is under review at this early
12 stage of the project to maximize PEF's control of PEF and balance the risk
13 of an EPC approach, a design-bid-build approach, or a program
14 management approach.

15
16 **Q. What is your opinion with respect to the LNP project concept and**
17 **contract strategy?**

18 A. In my opinion PEF has established a reasonable and prudent project
19 concept and contract strategy. The LNP project concept is a prudent
20 approach to managing a project of this nature. It utilizes a full-time project
21 team that manages contracts. In my opinion this project concept provides
22 reasonable control necessary to protect the Company's investment and is

1 consistent with the magnitude of the LNP complexity, cost, duration, and
2 regulatory significance.

3
4 **V. ASSESSMENT OF PROJECT MANAGEMENT.**

5 **Q. In your opinion, is the LNP project management prudent?**

6 A. Yes. In my opinion PEF Project Management is appropriately organized
7 and has reasonably fulfilled its project management responsibilities in both
8 the Levy plant project and the Levy baseload transmission project. The
9 LNP Project Management has documented roles and responsibilities for
10 LNP team members and there are appropriate interfaces between LNP
11 and G&TC project teams and other functional organizations, owners'
12 engineers, and contractors. The LNP Project Management is consistent
13 with electric utility best practices and standards for nuclear and other
14 major construction projects of this size and scope.

15
16 **Q. Please explain the project management for the Levy Nuclear Plants.**

17 A. The project organization for the NPD&LR was established in the "Project
18 Plan for New Nuclear Baseload Generation" in December 2006. The
19 organization included Managers of Engineering and Licensing and a
20 Supervisor of Project Controls under the direction of a General Manager.
21 The full team included discipline engineers for the nuclear steam supply
22 design, the balance of plant, electrical design, instrumentation and control

1 design, digital systems, civil / geological engineering construction
2 planning, and procurement. The licensing support included supervisors
3 for license renewal of the existing nuclear plants as well as licensing staff
4 for operations, environmental and quality assurance.

5 The NPD&LR department was a reasonable mix of personnel
6 supplemented by contractor personnel on some functions. This
7 organization has been sufficient to direct the contractors through the
8 COLA and SCA process and the planning, permitting, and disposition of
9 questions arising from the NRC's review of AP1000 design. During this
10 period the NPD&LR organization's emphasis has properly been to
11 complete the COLA and SCA. The organization met their target goals
12 with the SCA filing with the FDEP in June, 2008, and the Levy COLA and
13 Limited Work Authorization (LWA) request filing with the NRC in July
14 2008.

15 As I previously described, with the recent signing of the EPC, the
16 LNP entered a new phase of site preparation, detailed design, and
17 construction planning leading to construction. The Nuclear Plant
18 Development department was formed reporting directly to the PEF
19 President and CEO. This move reflects senior management's appropriate
20 recognition of the need to align the organization to focus support on Levy.

21 With the signing of the EPC contract, the project organizations for
22 both the plant and baseload transmission are also appropriately
23 transitioning into the detailed engineering, site preparation, and

1 construction phases. The new organization will be headed by a senior
2 executive with overall accountability for both the plant and the associated
3 baseload transmission, supported by a dedicated staff with strong project
4 management experience.

5
6 **Q. Can you please explain the Company's Baseload Transmission**
7 **Project Management?**

8 A. Yes. The engineering, design, and construction of the transmission
9 system associated with the addition of the Levy Nuclear Plant is being
10 managed by a dedicated Baseload Transmission Projects group in the
11 G&TC Department. The GT&C Department and the Baseload
12 Transmission Projects group were separated from the existing
13 Transmission Operations and Planning Department in late 2007. A new
14 Vice President was named to head the G&TC Department, and the
15 baseload transmission program was headed by managers in land
16 acquisition, engineering, transmission lines and substations.

17 In my opinion, the G&TC baseload transmission group was
18 effective in managing the necessary planning, study and siting work
19 associated with developing the Levy baseload transmission project
20 required to adequately interconnect the Levy Nuclear Plant into the
21 transmission system and deliver the incremental power to the grid
22 consistent with pertinent criteria. Their work in 2007 and 2008 included

1 conducting studies to evaluate route and design options, feasibility and
2 solutions, supporting the SCA and COLA, and developing the IPP.

3 The baseload transmission group developed the criteria for
4 selecting favored technically feasible alternates. These criteria reasonably
5 included, consistent with industry standards, the (1) total estimated cost,
6 including that associated with the underlying grid as a result of adding the
7 Levy generation; (2) reliability bases on performance for a comprehensive
8 set of contingency scenarios measured against existing NERC Reliability
9 Standards; (3) flexibility to have maximum achievable longevity for
10 undefined demands and new generation additions, when tested against
11 the NERC Reliability Standards; and (4) likelihood of success in
12 overcoming difficulties in licensing, permitting, land acquisition and
13 constructability.

14 The team initiated an extensive and appropriate set of studies to
15 support the recommended baseload transmission solution. To perform
16 the studies the baseload transmission engaged several firms with the
17 expertise to conduct the work. These firms and the studies focused on the
18 high level transmission options, the conceptual feasibility study for
19 converting portions of transmission system to operate at higher voltages,
20 fine tuning the 500-kV option, evaluating and comparing potential
21 transmission line corridors based on factors such as land use,
22 environmental, long range planning, and construction and maintenance
23 costs, and evaluating underlying grid impacts.

1 In early 2009, the Levy Baseload Transmission Project group
2 added a General Manager supported by an existing organization with
3 active recruitment for additional members of the baseload transmission
4 teams. The Levy Baseload Transmission group has identified some 67
5 transmission sub-projects that will comprise the baseload transmission
6 program for Levy. Baseload Transmission management has reasonably
7 anticipated that each of the sub-projects will benefit from assigning a
8 project manager to provide overall direction.

9
10 **VI. ASSESSMENT OF PROJECT CONTROLS**

11 **Q. Does the LNP have in place prudent project controls?**

12 A. Yes. PEF has established and implemented reasonable and prudent
13 project control processes to report costs, work progress, and schedule
14 performance consistent with the current status of the project and industry
15 standards. Further, PEF has established a reasonable and prudent
16 process to identify, develop, and implement enhancements and
17 improvements in the project controls process as the project transitions into
18 the site preparation and construction phases of EPC implementation for
19 the Levy plant and continues engineering and land acquisition activities for
20 the Levy Baseload Transmission Project.

21 PEF management has made project controls a key and visible
22 element of its management and project implementation process. PEF has

1 utilized a structured process for project scope development and for senior
2 management review, capital authorization and project phase initiation
3 through the BAP process and the IPP. PEF developed and validated
4 project estimates consistent with available information and with
5 appropriate input from contractors, vendors, consultants, other PEF
6 business units, industry and other professional sources.

7 As the LNP transitions into the site preparation and construction
8 phases, PEF is developing the LNP Integrated Master Plan and the Levy
9 Baseload Transmission Schedule to meet management goals and project
10 milestones. These schedules are being developed consistent with
11 appropriate input from contractors, vendors, consultants, and other
12 business units.

13 With the signing of the EPC, PEF is developing appropriate project
14 based policies, procedures, and processes to supplement the existing
15 corporate, group, and departmental policies, procedures and processes.
16 PEF is further enhancing the contract management process with a focus
17 on cost, schedule, contract administration, performance monitoring, and
18 reporting.

19 PEF management has made cost, schedule, and performance
20 monitoring a key element in both its project implementation and oversight
21 process via regular status and assessment meetings and reporting. PEF
22 is appropriately incorporating "lessons learned," industry and professional
23 "best practices," and other industry guidelines into its project control

1 process. Further, PEF has in place appropriate contract management
2 processes and procedures to administer the obligations of contractors
3 providing services to LNP.

4
5 **Q. How is budget performance monitored?**

6 A. The budget for LNP work provides a detailed breakdown of responsibility
7 and of accountability. Widely distributed monthly reports tie scope to
8 identified responsible managers and track budgets, actuals and variances.
9 The costs for contractor performed work is reviewed and controlled
10 through the contract administration process.

11 At the PEF Vice President level there is also a monthly budget
12 variance report prepared with input and analysis from the project team.
13 Overall budgets are reviewed by senior management through the Monthly
14 Business Review process. LINC currently monitors the overall LNP
15 budget.

16
17 **Q. How has management made cost and project controls a key and
18 visible element of the project management and implementation
19 process?**

20 A. PEF has emphasized quality, cost, schedule, and project management as
21 the continuing theme of its management processes. This emphasis
22 directly communicates and reinforces the importance of the project

1 controls function. Management attention is observed throughout the
2 management and project documents from the executive level down to the
3 contract management and weekly project team meeting level.

4 Management expectations are clearly stated and communicated.

5 PEF management has reasonably and prudently integrated the
6 project controls function into the top levels of the LNP organization in both
7 the Levy Plant and the Levy Baseload Transmission projects. For NPD
8 the Supervisor of Project Controls reports directly to the General Manager
9 (GM) of the NPD&LR department. Similarly, the project controls function
10 on the Levy Baseload Transmission Project reports directly to the VP-
11 G&TC via the Business and Management and Compliance Unit. Through
12 this direct reporting, the project controls function provides organizational
13 visibility and participation, thereby emphasizing the importance attached
14 by management to that role.

15
16 **Q. What are the Levy Nuclear Plant Project controls?**

17 **A.** The Project Controls include: (1) Project Plans; (2) Financial controls
18 (including contract earned value evaluations); (3) BAPs (and later the
19 IPP) and coordinated budget planning; (4) Project financial cash flow
20 analysis; (5) Schedules (engineering, contractor, and licensing); (6)
21 Nuclear records management and document control; (7) Nuclear training
22 coordination; (8) Risk Management Plans; (9) Nuclear quality
23 assessments; (10) Project performance Indicators; and (11) Vendor

1 performance monitoring (cost, schedule, and performance). These
2 Project Controls are consistent with industry best practices and standards.

3 The Project Controls group assures the project team performs
4 Project Controls effectively. During 2008, project control and contract
5 administration needs increased in anticipation of the transition to site
6 preparation and implementation of the EPC.

7 Project Controls performs contract management. Contractors are
8 required by the contract to meet specific performance, staffing and
9 reporting requirements consistent with industry standards. Contractor
10 project status reports address, when necessary, issues requiring
11 management attention, quality issues, health and safety issues, teamwork
12 and accountability issues, project budget and invoicing information, scope
13 revisions, budget and schedule performance, monthly cash flow, requests
14 for information, the project schedule, documentation submittals, and work
15 accomplished during the month. These are the types of issues I expect to
16 see in contractor status reports on projects of this size and scope
17 consistent with industry practice and standards.

18 As a monthly summary of the project, the Supervisor of Project
19 Controls prepares a monthly Nuclear Plant Development Performance
20 Report. This report typically covers such topics as (1) safety, cost,
21 schedule issues and activities, including identifying any key issues and
22 providing a look-ahead overview; (2) performance data, including key
23 performance indicators (KPI), integrated cost performance, contract

1 status, contractor cost and schedule performance, scope changes, high
2 risk or critical issues, organization, and staffing; (3) significant project
3 decisions; (4) self-evaluation results; (5) engineering updates; (6) licensing
4 updates; (7) COLA and AP1000 status; and (8) public and media
5 interaction information. Again, these topics are consistent with industry-
6 accepted practices for project reports on projects of this size and scope.

7
8 **Q. What are the Levy Baseload Transmission Project controls?**

9 A. The Project Controls function for the Levy Baseload Transmission Project
10 is provided by the G&TC Business Management and Compliance (BM&C)
11 unit. The BM&C director reports directly to the Vice President – G&TC as
12 does the Levy Baseload Transmission Project GM. This direct link to the
13 responsible executive emphasizes the importance and visibility of the
14 project controls function. This approach also allows dedicated and
15 matrixed project controls personnel to be assigned to the Levy Baseload
16 Transmission team with managerial direction and supplemental support as
17 needed. Managers for project controls and for financial and business
18 services, as well as a supervisor, all report to the director of BM&C.

19 The key responsibilities for the Baseload Transmission Project
20 Controls group include (1) real-time schedule and critical path analysis; (2)
21 cashflow development / assessment with contractor provided data; (3) key
22 performance indicator development; (4) change order management; (5)
23 estimate development and estimate reviews; (6) contractor auditing and

1 claims review; (7) contract administration; (8) contractor schedule and cost
2 interface; (9) cost issue assessment; (10) management of on-site project
3 cost contractors; and (11) lead routine contractor review sessions. This
4 group is supported by a financial and business service group with primary
5 responsibilities for cost management and reporting, interface with project
6 controls, financial analysis, budget development and analysis, and project
7 set-up and analysis. Cost estimating and other support functions have
8 been provided by BM&C as needed. These Project Control
9 responsibilities and supportive financial and business services are
10 consistent with our industry experience and industry standards.

11 To date, contract administration on the Levy Baseload
12 Transmission Project has been a coordinated process. The overall
13 approach to contract administration on the project is currently and
14 appropriately being assessed with the execution of the EPC, the recent
15 addition of the Owner's Engineer, the possible use of a real estate
16 acquisition manager, and the ultimate need to manage some 67
17 construction projects.

18 The BM&C unit prepares monthly reports summarizing the
19 schedule and financial status of the transmission project for senior G&TC
20 management. Typical reports address, when necessary, (1) actual,
21 budget and projected expenditures; (2) actual and projected total costs by
22 year - line, substation, and AFUDC; (3) milestone cost history; (4)
23 schedule dates and key events; (5) required third party approvals; (6)

1 issues their impacts, and responses; and (7) the project risk matrix with
2 the likelihood and consequences of identified risk items. Also, detailed
3 month-by-month graphs and tables showing individual project actual,
4 budget, variance, and projected costs are produced.

5 At the project level, the Levy Baseload Transmission project
6 conducts two monthly reviews: (1) the Monthly Executive Program
7 Review, which provides G&TC management (including the VP- G&TC)
8 with program status, cost and schedule updates, near-term activities,
9 program risks and challenges; and (2) the Stakeholders Monthly Program
10 Review, which provides information, integration, and coordination
11 meetings between the Project Team and involved PEF Departments. The
12 Levy Baseload Transmission team also developed a more detailed
13 monthly report to provide more information on performance, cost,
14 schedule, compliance, risks and other project elements. Weekly status
15 reports are also developed by the Levy Baseload Transmission team
16 showing overall trends, financial information, risks, 90-day look-ahead
17 schedules, percent complete, staffing levels and actions/ issues. These
18 levels of reviews and reports are consistent with best practices in the
19 electric utility industry for projects of similar size and scope.

20
21 **Q. Is the LNP cost estimation process prudent?**

22 **A.** Yes. The cost estimating process for the LNP is reasonable and prudent.
23 The estimate is the result of substantial effort by the Levy Plant Project

1 and the Levy Baseload Transmission Project. PEF has identified the full
2 scope of the project, including all activities to secure permits,
3 authorizations, and approvals; the cost of land and rights of way; the
4 owner-managed project costs; the initial fuel loads; the staffing for startup
5 and commissioning; fees and insurance; escalation and contingencies;
6 and the financing cost. The cost estimates were developed with the input
7 of engineering firms that had similar project knowledge. The estimates
8 were independently reviewed to validate the documentation supporting the
9 costs and to provide an independent assessment of the cost estimate.
10 This process includes the elements of a sound estimating process that is
11 consistent with industry standards.

12
13 **Q. Did PEF validate the project estimates?**

14 **A.** Yes. PEF conducted an internal audit of the documentation supporting
15 the prices presented by WEC / SSW for the EPC agreement, engaged
16 and independent firm to review the WEC / SSW estimate and schedule
17 information to construct the AP1000 units and the Levy site specific work,
18 and commissioned its transmission owner engineer to provide an
19 independent source of cost information of the transmission project.

20 PEF contracted Burns and Roe to perform an independent
21 evaluation review and validation of the AP1000 cost and schedule
22 "package." Burns and Roe is a worldwide engineering and construction
23 firm with expertise in nuclear power plant costs. The firm is currently the

1 owner's engineer for Entergy's next generation nuclear plant and is the
2 architect / engineer partner for several combined COLAs. Burns and Roe
3 is in the process of preparing its final report.

4 PEF also audited the LNP EPC Contractor Price Book to verify
5 proper documentation of the WEC / SSW Price Books. A PGN Senior
6 Auditor was assigned to verify that there is sufficient detail in the cost
7 estimate from the EPC WEC / SSW team to fully support the total price.
8 As part of the review, the auditor advised the EPC team of areas where
9 there was insufficient detail and then monitored improvements until full
10 necessary detail was present in the Price Book.

11
12 **Q. Did PEF validate the Baseload Transmission Project cost estimate?**

13 **A.** Yes. PEF tasked Patrick Energy Services Inc. (Patrick Engineers), as the
14 Owner Engineer, to provide an independent estimate of four elements of
15 the proposed baseload transmission project including: (1) Kathleen to
16 Lake Tarpon - 230-kV Transmission Line (50 miles); (2) Central Florida
17 South - 500-kV Transmission Line (60 miles); (3) Kathleen Substation –
18 230-kV; and the (4) Central Florida South Substation – 500-kV/230-kV.
19 Patrick Engineers also provided PEF with a detailed estimate for each of
20 the two substations and a higher level estimate for each of the two lines.
21 PEF's estimating staff compared the PEF estimate based on the prior
22 Power Engineering estimate with the Patrick Engineers estimate after
23 accounting for items Patrick Engineers did not include, such as real

1 estate, wetlands mitigation, PEF pre-construction cost, and the difference
2 in escalation and contingency philosophy, and, after incorporating these
3 adjustments, PEF determined the PEF and the Patrick Engineers
4 estimated costs for substations were essentially the same. Transmission
5 and Project Controls management made the reasonable decision to defer
6 any additional cost comparisons pending the completion of additional
7 engineering and the planned development of a new project estimate within
8 the next few months.

9
10 **Q. What is PEF's approach to scheduling the LNP?**

11 A. The overall approach to scheduling the LNP is to utilize an Integrated
12 Master Plan (IMP) process to ensure that project activities support the key
13 project goals and milestones established by management. The IMP is
14 summarized as a one page barchart schedule showing major projects or
15 other activities and the supporting milestones. The summary IMP is
16 reviewed and approved by the Project General Manager.

17 The IMP scheduling database includes all activities required from
18 COLA development and NRC review, engineering, procurement,
19 fabrication, construction, staffing, training, and startup activities leading to
20 commercial operation. It is being developed directly from the detailed
21 project schedules required for individual Levy Project contractors including
22 WEC / SSW. It also contains schedule information from various other

1 sources including the various PEF business units. Currently, the IMP
2 scheduling database contains nearly 90,000 individual activities.

3 This schedule database is also used to generate reports to allow
4 management to monitor and plan the overall project and to analyze
5 individual contractor schedule performance. Such reports include (1)
6 monthly contractor status against baseline, (2) strategic planning schedule
7 to ensure milestone coordination, (3) critical path analysis by work break
8 down structure (WBS), (4) float variance reports, (5) look-ahead reports,
9 (6) weekly milestone reports, (7) project end-game reports for
10 achievement of milestones, and (8) as-built schedule for completed
11 projects.

12 For the Levy Baseload Transmission, PEF is developing an overall
13 project schedule to serve as a baseline to assess schedule performance
14 against project milestones and to manage and monitor the work of the
15 Owner's Engineer, the real estate acquisition contractor, and, ultimately
16 the construction program. It will also be used to monitor and coordinate
17 the work of the various participating PE business units and other project
18 participants.

19 This approach is consistent with my experience and industry
20 standards for project schedules for projects of similar size and scope.
21 Also, PEF is using industry accepted scheduling tools and processes for
22 the incorporation of appropriate data into the schedules.

23

1 **Q. How is PEF implementing this approach for The Levy Nuclear**
2 **Plants?**

3 A. In order to implement the development of the IMP for the Levy Plant, PEF
4 added an experienced project nuclear project controls and scheduling
5 specialist to the Project Controls Staff. This individual brought over thirty
6 years experience at nuclear plants in startup, operations and outage
7 management. Initial efforts to develop an IMP focused on corporate
8 milestones and, in collaboration with S&L, the Owner's Engineer, the
9 development of an appropriate WBS and interface with SSW and WEC's
10 detailed schedules. By March 2008, this was accomplished with Rev. 2 of
11 the IMP which was approved by the Project GM and issued.

12 The IMP development continued using Primavera scheduling
13 software, a generally recognized and accepted electric utility scheduling
14 tool. The IMP schedule linked to data from the WEC and SSW that
15 contains approximately ten individual schedules with over 88,000
16 schedule items. In addition, schedule information from other contractors
17 such as S&L was also imported. Finally, templates for the AP1000,
18 Toshiba schedule, four procurement schedules, and three construction
19 schedules were established. One source of template information is the
20 New Plant Deployment Program Model. This Model provided a combined
21 licensing and deployment model schedule for prospective and actual new
22 licensing plant licensing applicants and is detailed in a 2008 Electric
23 Power Research Institute report.

1 With the execution of the EPC at the end of 2008, NPD anticipates
2 that Rev. 3 of the IMP schedule will be issued shortly and that a baseline
3 IMP schedule will also be developed. Information from the Levy Baseload
4 Transmission Program Schedule prepared by G&TC will also be
5 incorporated.

6
7 **Q. How is PEF implementing the project schedule approach for the Levy**
8 **Baseload Transmission?**

9 A. When the Levy Baseload Transmission project was authorized preliminary
10 schedules with focus on the near-term objectives were developed based
11 upon assumed scope of work. Following submittal of the SCA and the
12 selection of a routing option, a more detailed (Level 3) project schedule
13 was developed with a dedicated scheduler with extensive experience on
14 large projects worldwide. The Level 3 schedule was also developed
15 using the industry standard Primavera scheduling software with input from
16 Levy Baseload Transmission team members, the Levy Plant team,
17 supporting consultants, and others, such as the PEF transmission and
18 Crystal River power station operators. The draft schedule provided a
19 logical sequence for completing the 67 sub-projects that comprised the
20 Levy Baseload Transmission project.

21 This draft schedule was peer reviewed and it was determined that
22 the draft schedule provided a logical sequence to achieve the objectives of
23 ensuring all key substations would have a continuous supply of power as

1 construction progressed. It also provided the necessary critical path
2 sequence to be able to supply backfeed power to support the system
3 startup and commissioning of Levy Unit 1 and to complete the Levy
4 Baseload Transmission to support Levy 1 and Levy 2 operation. Further,
5 it appropriately provided schedule windows for work performed by others,
6 such as the Owner's Engineer, the land acquisition team, and by the
7 individual construction contractors. The project cost estimate was also
8 loaded into the schedule to obtain an updated project cash flow.

9 Patrick Engineers is using the schedule to plan the remaining
10 transmission design work. Rev. 0 of this schedule will be issued during
11 the first quarter of 2009 to serve as the baseline for future schedule
12 updates and to monitor schedule progress against established milestones.

13
14 **Q. How will PEF manage LNP contractor performance?**

15 **A.** Oversight of contractors is accomplished by direct engagement of LNP
16 technical, management, and project controls staff. This engagement
17 includes face-to-face, e-mail, telephone, and formal and informal
18 meetings. In addition, the quality program and internal audits provide
19 independent reviews of contractor performance. PEF also requires
20 contractors to provide monthly reports on their accomplishments and their
21 performance under the contract relative to safety, quality, scope, budget,
22 invoicing, schedule, and future work. Management reviews are conducted
23 monthly.

1 Typically, work is assigned under a task order process where an
2 assignment is made and an estimate is developed by the contractor to
3 complete the work scope. The Company reviews the technical scope for
4 responsiveness and the cost for reasonableness. Once approved, the
5 contractor may proceed and report progress against the scope, cost and
6 schedule requirements. Changes in work require similar review and
7 analysis. Changes are evaluated by technical personnel providing
8 oversight of the work and management. An impact evaluation is prepared
9 to document the change and management approval.

10 This contract management process to monitor contractor
11 performance is consistent with best practices and industry standards.

12
13 **Q. How has PEF provided oversight so far of contractors working on**
14 **the LNP?**

15 **A.** PEF management was kept appropriately informed of progress through
16 face-to-face meetings and reports, from both internal organizations and
17 from contractors. The monthly contractor reports were an effective
18 mechanism and therefore prudent way to monitor progress at this stage of
19 the LNP to identify any areas requiring management action on major
20 contract work activities. These external reports covered progress in the
21 areas identified in Exhibit No. ____ (GRD-6) to my testimony.

22

1 **VII. RISK MANAGEMENT**

2 **Q. Does PEF have a reasonable and prudent LNP risk management**
3 **process?**

4 A. Yes. The LNP risk management process incorporates the PEF corporate
5 risk management policy and implements the risk management program for
6 both the Levy nuclear project and the Levy baseload transmission project.
7 This risk management process actively identifies and tracks risk and
8 provides PEF management with a logical and coherent framework to
9 evaluate, prioritize, and develop courses of action to mitigate or avoid
10 major project risks. The LNP risk management process is consistent with
11 best practices for risk management in the industry and consistent with
12 what I have observed on well-managed projects, including nuclear
13 construction projects, of a similar scope and size to the LNP.

14 The LNP risk management policy was consistent with Project
15 Management Body of Knowledge (PMBOK) issued by the Project
16 Management Institute (PMI), and standard risk management practices
17 utilized by the United States Department of Defense and the DOE. The
18 2004 edition of the PMBOK guide identifies six processes as the main
19 elements in a risk management process: (1) Risk Management Planning,
20 (2) Risk Identification, (3) Qualitative Risk Analysis, (4) Quantitative Risk
21 Analysis, (5) Risk Response Planning, and (6) Risk Monitoring and
22 Control. These criteria were embodied in the Levy nuclear project and
23 Levy baseload transmission risk management processes and documented

1 in two current process documents and the new Project Management
2 Center of Excellence (PMCoE) standard. These documents are the
3 "Nuclear Plant Development Process Document for Risk Management"
4 NPD-PD-05 and the G&TC "Project Risk Planning Guideline" CON-GTCX-
5 00008.

6 The PMCoE was established in 2008 to provide guidance across
7 the entire organization regarding the standards endorsed by management
8 which exhibit excellence in project management. In March 2009, the
9 PMCoE will issue a new risk management standard, "Project Risk
10 Management" PJM-SUBS-00008, which will be the new corporate
11 standard and will be applicable to all projects. This standard builds upon
12 best practices consistent with the industry standards that I have identified
13 and that have been incorporated in the LNP risk management process.

14
15 **Q. How did PEF implement risk management for the LNP?**

16 **A.** Beginning with the COLA phase, PEF has employed risk management
17 techniques to manage risks and opportunities on an ongoing basis. The
18 project team identified risks and prepared a Risk Register to track them.
19 Each risk was evaluated by the originator and then submitted for
20 management review and risk response determination. Action plans or
21 contingency plans were developed to mitigate the high priority risks. LNP
22 management incorporated discussions of new, high priority, or changing
23 risks in monthly execution review meetings as a permanent subject.

1 As the transmission project was formulated, the G&TC risk
2 management policy was applied to the baseload transmission project.
3 Joint risk identification sessions were conducted between the NPD&LR
4 and the Levy Baseload Transmission teams.

5 As presented in the LNP IPP, thirteen common and specific risks to
6 the generation and transmission projects were identified and the potential
7 impacts and responses were delineated.

8
9 **Q. Can you provide us with examples of the application of PEF's risk**
10 **management strategy to the LNP?**

11 **A.** Yes. PEF incorporated risk management in each LNP major decision.
12 PEF management established an overall philosophy to preserve the
13 option for deploying new nuclear power plants to meet the growing need
14 for baseload generation and limit the financial risk while maximizing the
15 Company's control. This philosophy was demonstrated in several risk
16 mitigation strategies.

- 17 • Project scope control – The selected nuclear reactor technology
18 is an NRC certified design which reduces the potential for scope
19 changes. The construction methods will use modularization
20 techniques which have resulted in shorter construction times.
- 21 • Collaboration with other utilities – PEF joined with other utilities
22 that selected the AP1000 to use a reference COLA. The

1 Company also helped form a joint owners group of utilities
2 constructing AP1000 plants.

- 3 ● Independent validation of estimates – The WEC / SSW cost
4 information for the AP1000 was independently reviewed before
5 entering into the EPC agreement. The Internal Audit
6 Department reviewed the cost documentation. Burns and Roe,
7 an architect engineering firm with expertise in nuclear plant
8 costs, was hired to perform an independent validation of the
9 AP1000 cost and schedule estimates. Also, the baseload
10 transmission cost model was independently reviewed by
11 Internal Audit, and comparative estimates developed by the
12 owner engineer were used to validate the reasonableness of the
13 initial estimate.
- 14 ● EPC contract terms and conditions review – PEF engaged Price
15 Waterhouse Coopers to perform an independent review of the
16 contract terms and conditions of the EPC contract and advise
17 PEF management of their observations and make
18 recommendations.
- 19 ● EPC contract strategy – To achieve a level of price certainty,
20 PEF negotiated performance incentives, penalties, warranties,
21 liquidated damage provisions and parent guarantees, designed
22 to incent the contractor to perform efficiently. Over half of the

- 1 contract price is fixed price or firm price with agreed-upon
2 escalation factors.
- 3 ● Benchmarking and Lessons Learned – PEF benchmarked the
4 LNP construction schedule with international projects completed
5 in late 1990s and early 2000s. Lessons learned will be used
6 from the Haiyang, China Nuclear Power Station where six
7 AP1000 units are being constructed. NPD&LR participated with
8 INPO in a benchmarking visit to Japan to gain an understanding
9 of the experience of Japanese utilities. The Levy Baseload
10 Transmission Project benchmarked other utilities constructing
11 major transmission projects. These utilities included American
12 Electric Power, Allegheny Power, and Northeast Utilities.
 - 13 ● Research on materials pricing and supply – The Baseload
14 Transmission Project team engaged an industry supply chain
15 expert firm to research the availability of transmission
16 commodities, suppliers and materials pricing.
 - 17 ● Additional Risk Management Techniques - As the project
18 transitions to the Site Preparation and Construction phase, a
19 consulting firm has been engaged to evaluate and provide
20 recommendations to make the NPD risk management process
21 more robust.
- 22

1 **Q. What is your opinion with respect to PEF's LNP risk management**
2 **strategy?**

3 A. In my opinion PEF has established a sophisticated risk management
4 process. The LNP risk management process is a prudent approach to
5 managing a project of this nature and one that is consistent with best
6 practices in the industry for projects of this scope and size. Risks have
7 been identified and assessed and responses have been developed.
8 There is awareness of the risk management strategy apparent at the PEF
9 senior management level, and the project and support organizations.

10

11 **VIII. POLICIES AND PROCEDURES.**

12 **Q. Does PEF have in place prudent LNP policies and procedures?**

13 A. Yes. PEF has comprehensive policies and procedures for each function
14 to be accomplished either directly or in support of the LNP. Policies and
15 procedures are in place for resource planning and budgeting, cost
16 management, establishing a capital project, business analysis, funding
17 authorization, project management and procurement, and contract
18 administration. In addition, the NPD&LR and the new NPD are governed
19 by applicable PGN Nuclear Generation Group procedures and quality
20 requirements. The Levy Baseload Transmission Project is also governed
21 by G&TC Department procedures.

1 PEF policies are summary level documents that communicate
2 broad management principles or philosophy and provide direction for
3 corporate decision making. Policies often require other documentation
4 (such as implementing procedures and forms) to support goals and
5 directives established by the policies.

6 PEF procedures include specific statements, directives,
7 instructions, processes, and supporting documentation used by PEF
8 personnel to perform specific work processes, conduct programs, or
9 implement policies. Procedures also include training documents,
10 catalogs, or instructional guides or manuals. The procedures identify the
11 purpose of the procedure, the applicable references including other
12 procedures that are integral to the procedure, the responsibility of various
13 participants for carrying out the procedure, and the specific steps to carry
14 out the procedure.

15 PEF's policies and procedures define expectations and
16 accountability for work product, identify responsibilities, serve as training
17 tools for staff, and provide a program for review and updates as the LNP
18 matures. PEF's policies and procedures are, accordingly, consistent with
19 best practices and industry standards.

20
21 **Q. Do the NPD and GT&C organizations have in place the procedures**
22 **necessary to support effective project management of the Levy**
23 **Nuclear Project and the associated Baseload Transmission system?**

1 A. Yes. The underlying basis for managing the Levy Plant and Baseload
2 Transmission projects is the extensive existing procedural hierarchy by
3 which both organizations have traditionally managed plant and line
4 projects. In addition, PEF has established an overall governance policy to
5 guide the construction of the projects. Further, a set of Levy-specific
6 procedures is currently under development to address specific conditions
7 encountered in executing this project.

8 The LNP governance policy is a comprehensive guide for project
9 execution. It establishes roles and responsibilities based on using internal
10 departmental practices and procedures. This governance approach
11 provides coordinated LNP oversight and management and ensures
12 independent oversight of line organization activities with accountability
13 remaining with the line organizations. Specific governance policy goals
14 include independent oversight, appropriate management reviews
15 reconciliation with internal practices and procedures, creation of a
16 framework for project controls, the provision for effective cost
17 management, and timely management reporting.

18 The governance policy recognizes the significance of early
19 detection of cost and schedule variances and commits to the continued
20 use of performance criteria such as Cost Performance Indicators (CPIs),
21 Schedule Performance Indicators (SPIs), and COLA performance
22 monitoring. Other Key Performance Indicators (KPIs) will be developed as
23 detailed design begins and construction activity is planned. The policy

1 addresses integrated change control as an essential management
2 function to encourage sound decision making and alternative
3 consideration. A specific change control process, using Passport or
4 similar software, will be developed to control changes based on a project
5 Work Breakdown Structure.

6 The basis for the development of Levy project-specific procedures
7 is the existing NGG Project Management Program Manual (the Manual).
8 This document provides an appropriate set of guidelines, processes and
9 methods for project planning, execution and control to achieve effective
10 project management for the Levy COLA development and planning phase.
11 This Manual and the specific implementing procedures of the executing
12 organizations also provide a reasonable set of underlying procedures to
13 guide the project going forward.

14 The Levy project team expects these procedures will be evaluated
15 and revised or supplemented as needed to ensure adequate guidance as
16 the project proceeds through the more complex detailed engineering and
17 construction phase. NPD specifically anticipates that more advanced and
18 defined processes for cost engineering, schedule integration and quality
19 for large scale nuclear construction will be developed during the
20 construction process. The Manual includes direction for these project
21 management tasks and for project management control of the execution of
22 the work. The Manual also addresses project completion activities,

1 including functional testing, startup and integration, lessons learned
2 development and paperwork closeout.

3 NPD has also created the "Levy EPC Implementing Procedure
4 Development Plan," which identifies 33 specific new policies and
5 procedures for development, specifies timelines for completion, and notes
6 any triggering condition or need for specific listed policies or procedures.

7 For transmission activities, the G&TC guideline, Execution of Large
8 Construction Projects and Programs (the Guideline), provides an
9 appropriate set of directives for the baseload transmission program team
10 assigned to the construction group. This procedure includes project
11 management, engineering, environmental support, right-of-way
12 acquisition, project controls and business management support. The
13 Guideline describes the overall process flow, responsibilities, organization
14 and interfaces for planning, executing, monitoring, controlling and closing
15 G&TC projects, and specifically the Levy baseload transmission projects.
16 The Guideline project management sections address project management
17 action. The G&TC department plans future or revised policies, procedures
18 and controls to address specific Levy Transmission Project areas.

19
20 **Q. Are PEF's policies and procedures prudent?**

21 **A.** In my opinion PEF has reasonable and prudent policies and procedures
22 that are comprehensive, integrated, and enforced. The policies and

1 procedures are what I would expect to see for projects of this size and
2 scope and are consistent with industry best practices.

3
4 **VIII. PROJECT ASSESSMENT**

5 **Q. Does PEF have in place prudent project assessment mechanisms**
6 **and processes?**

7 A. Yes. PEF has in place a reasonable and prudent system of audits,
8 independent reviews, benchmarking initiatives, and self assessments to
9 ensure that procedures, standards, objectives, and contractual obligations
10 are met. Several organizations provide assurance that PEF line
11 organizations and contractors meet the standards required by regulatory
12 agencies and good business practices. These organizations include:
13 Internal Audit, Nuclear Quality Assurance (QA), Project Assurance, and
14 Self Assessments. As part of the QA program, the NPD&LR was
15 reviewed by a Performance Evaluation Support (PES) team. In addition,
16 PEF sought input from industry organizations and vendors through
17 benchmarking its performance in comparison to other projects. These
18 LNP project assessment mechanisms and processes ensure that LNP
19 performance is reviewed, LNP procedures are followed, quality is
20 maintained and contractual obligations are met.

21
22 **Q. Please describe the Internal Audit Project Assessment process.**

1 A. The Internal Audit Services Department reports directly to the PGN BOD
2 via the Audit and Corporate Performance Committee. The Audit Services
3 Department develops an annual audit strategy for major construction
4 projects like LNP by assessing the project's current and/or near-term
5 lifecycle phase and then identifying the categories of high risk exposure
6 confronting each project. These may include Business and Regulatory
7 Environment, Schedule, Procurement and Contracts, and Cost
8 Management. The high-risk categories are then emphasized in the annual
9 Audit Plan, which is reviewed by the Audit and Corporate Performance
10 Committee. The Audit Services Department also administers the
11 Company's Ethics Program.

12 Guided by this audit planning process, the Audit Services
13 Department has conducted the following internal audits on the LNP: (1)
14 Levy Nuclear Financial and Regulatory Team Review; (2) Plant and
15 Transmission Cost Models; (3) Compliance with the Florida Nuclear Plant
16 Cost Recovery Rule; (4) COLA Licensing for New Nuclear Plants; and (5)
17 Documentation supporting the EPC "Price Books." Audit reports were
18 provided to the appropriate Vice Presidents and Directors of the audited
19 departments, with an overall opinion and specific observations and
20 recommendations. In consultation with the audited department's
21 management team, each observation and recommendation issue was
22 assigned an action plan. Each action plan identified an owner and a
23 completion date. The audits performed on LNP were appropriately

1 responded to and recommendations were acted upon or are scheduled to
2 be completed in 2009.

3

4 **Q. Can you please explain the Nuclear Quality Assurance Assessment?**

5 A. The NPD&LR assigned Quality Assurance (QA) analyst from the Nuclear
6 QA organization ensures the nuclear project satisfies the requirements of
7 the QA program. Audits were regularly performed of internal NPD&LR
8 functions, such as following project plan commitments as well as
9 evaluating the QA performance of contractors. For example, decisive
10 action was taken by QA on two contractor firms with the issuance of "Stop
11 Work" orders for deficiencies that did not meet QA requirements. Follow
12 up audits were performed to verify that all deficiencies were corrected.
13 These examples demonstrate that the Quality Assessment project
14 assessment process works as intended. The NPD will also come under
15 Nuclear QA oversight to ensure adherence to the PGN Nuclear QA
16 Program.

17 The PES assessment concluded that the NPD&LR department was
18 effectively meeting its performance objectives for each of the four
19 elements of the NGG Self Evaluation Program: (1) self-assessment use,
20 (2) corrective action effectiveness, (3) operating experience utilization, and
21 (4) benchmarking activity. Specifically, NPD&LR's active participation in
22 nuclear industry organizations such as NuStart, the AP1000 Builder's
23 Group, the Design Centered Working Group, and the New Plants Working

1 Group ensures that the organization remains aware of new or critical
2 industry issues. The PES assessment also commended the NPD&LR
3 department for their efforts in utilizing lessons learned from other utilities in
4 the industry. Specifics included COLA submittal, ESP submittal, Limited
5 Work Authorization applications, and plans for further benchmarking of
6 major equipment fabrication planning and other long lead time activities.

7
8 **Q. Please explain the project assurance for the LNP.**

9 A. In 2007, PGN created the Project Assurance organization to optimize
10 institutional and project-specific understanding and awareness that
11 decisions for which cost recovery will be sought be just, reasonable, and
12 prudent based on the information reasonably available at the time the
13 decision was made. The Project Assurance organization supports the
14 LNP to ensure that documentation of key project decisions is adequate to
15 explain the basis for, and reasonableness and prudence of, the decision.
16 An electronic library has been established to collect significant documents,
17 reports, and files that may have relevance to cost recovery for the LNP.

18
19 **Q. What is the Self Assessment Project Assurance process?**

20 A. The LNP management has performed self-assessments of its activities
21 over the course of the COLA preparation effort. LNP staff performed self-
22 assessments of (1) financial charging practices, (2) the COLA preparation

1 and review process, (3) the effectiveness of NPD contract administration
2 and its interfaces with multiple vendors, and (4) the effectiveness of
3 NPD&LR project implementation and quality controls. Planned 2009 LNP
4 self assessments include (1) document control and records management
5 to determine overall performance improvement from a 2008 QA focused
6 assessment, (2) design and license basis control, (3) oversight of design
7 finalization to ensure regulatory compliance, and (4) contractor security
8 requirements.

9
10 **Q. What benchmarking for the LNP has been performed?**

11 A. PEF has worked closely within the industry to improve its effectiveness by
12 participating in shared activities to support nuclear generation. This peer
13 collaboration effort includes active membership in NuStart, which resulted
14 in cost savings for engineering and licensing associated with COLA
15 development and design finalization of the AP1000 design. Also, in
16 August 2007, PEF entered into an operating agreement with other utilities
17 planning to utilize the AP1000 reactor technology and established the
18 AP1000 Owners Group (APOG). This peer effort is allows for
19 collaborative sharing of common technical, engineering and support
20 service costs associated with construction of an AP1000 reactor.

21 NPD&LR participated with INPO in a benchmarking visit to Japan to
22 gain an understanding of the experience of Japanese utilities and reactor
23 manufacturers in constructing nuclear power plants during the late 1990s

1 and early 2000s. NPD&LR also made a site visit to the Haiyang, China
2 Nuclear Power Station where six AP1000 units are being constructed.

3 The Levy Transmission Baseload Project used benchmarking with
4 several other utilities engaged in major transmission projects including
5 American Electric Power, Allegheny Power, and Northeast Utilities. The
6 project also engaged Power Advocate Inc. to perform an independent
7 review of contract strategy and assess the transmission materials market.

8
9 **IX. CONCLUSION: LNP PROJECT MANAGEMENT AND PROJECT**
10 **CONTROLS ARE REASONABLE AND PRUDENT.**

11 **Q. Are the LNP project management and project controls reasonable**
12 **and prudent?**

13 **A.** Yes. In my opinion PEF has in place the requisite processes and
14 organization to manage a project that has the magnitude and complexity
15 of the LNP. PEF has undertaken the LNP using reasonable and effective
16 management practices that demonstrate the LNP has been reasonably
17 planned, organized, and controlled by PEF to meet LNP goals for scope,
18 schedule, budget, regulatory, safety, and quality requirements.

19 Senior management oversight is extensive. Effective coordination
20 of the supporting departments exists. The project governance policy
21 further provides a comprehensive guide for the LNP with coordinated
22 independent oversight and management. The LNP had a reasonable

1 project management organization and is appropriately transitioning to the
2 new NPD organization with EPC execution. The EPC contract is a
3 reasonable contract that balances risk and PEF control using a
4 combination of fixed price, firm price, target price, and time and materials
5 arrangements. Further, the LNP has a sophisticated risk management
6 process consistent with industry best practices. There are reasonable
7 project controls in place to develop estimates, monitor schedules and
8 control contractors, there is reasonable reporting and performance
9 monitoring, and the planned expansion of performance indicators will
10 enhance performance monitoring further. There is an effective and
11 comprehensive set of existing project management and execution policies
12 and procedures that are being supplemented with specific LNP
13 procedures. There is extensive use of project reviews, internal audits,
14 benchmarking, self assessments, and QA. As a result, the LNP project
15 management and project controls are reasonable and prudent.

16
17 **Q. Does this complete your testimony?**

18 **A. Yes.**

1 **BY MR. ROACH:**

2 **Q.** Mr. Doughty, could you summarize your
3 testimony?

4 **A.** Yes.

5 **COMMISSIONER EDGAR:** And, I'm sorry, did you
6 ask if he had been sworn?

7 **MR. ROACH:** He has been. Yes, ma'am.

8 **COMMISSIONER EDGAR:** He has.

9 **THE WITNESS:** Yes, I have.

10 **COMMISSIONER EDGAR:** Okay. I apologize. Go
11 right ahead.

12 **THE WITNESS:** Chairman and Commissioners, the
13 purpose of my testimony is to present my expert opinion
14 that Progress Energy Florida's Levy Nuclear Plant
15 project management and project controls are reasonable
16 and prudent. This is a result of an independent review
17 conducted earlier this year of the project in seven
18 major areas: Project oversight, project concept and
19 contract strategy, project management, project controls,
20 risk management, policies and procedures in place and
21 project assessment.

22 In my opinion, Progress Energy has the
23 requisite processes and organization to manage a project
24 of Levy Nuclear Plant's magnitude and complexity.
25 Progress Energy has reasonable and effective management

1 practices for this project. Senior management oversight
2 and involvement are extensive. The project governance
3 policy provides a comprehensive guide for the project
4 with coordinated independent oversight.

5 I also conclude that the Levy Nuclear Project
6 has a sophisticated risk management process consistent
7 with industry best practices. There are reasonable
8 project controls in place to develop estimates, to
9 monitor schedules and to control contractors. There is
10 reasonable reporting and performance monitoring, and
11 those processes are being improved with the signing of
12 the EPC contract.

13 Additionally, there is an effective and
14 comprehensive set of existing project management and
15 execution policies and procedures. And, finally, there
16 are extensive project reviews -- internal audits,
17 external audits, benchmarking, self-assessment and
18 quality control reviews -- to comply with NRC
19 requirements. All of these demonstrate that the Levy
20 Nuclear Plant project management and project controls
21 are reasonable and prudent. That finishes my summary.

22 **MR. ROACH:** The witness is available for
23 cross-examination.

24 **COMMISSIONER EDGAR:** Thank you.

25 Mr. Rehwinkel.

1 **MR. REHWINKEL:** No questions.

2 **COMMISSIONER EDGAR:** Mr. Brew.

3 **MR. BREW:** Thank you, Commissioner.

4 **CROSS EXAMINATION**

5 **BY MR. BREW:**

6 **Q.** Good morning, Mr. Doughty. How are you?

7 **A.** Good morning. I am fine.

8 **Q.** You said in your summary that you performed
9 the work for Progress earlier this year. Was the work
10 that you performed for Progress exclusively for the
11 purpose of this proceeding?

12 **A.** Yes.

13 **Q.** Do you do any other work for Progress relating
14 to its nuclear program?

15 **A.** No, not currently.

16 **Q.** Did you perform any work for them in 2008?

17 **A.** No.

18 **Q.** Okay. Did you attend any Progress/NRC
19 meetings or discussions?

20 **A.** Any Progress meetings with the NRC?

21 **Q.** NRC, yes.

22 **A.** No, I did not.

23 **Q.** Okay. Your discussion in direct testimony has
24 a considerable discussion of, of prudence reviews; is
25 that right?

1 **A.** Yes, it does. Could you refer me to the page
2 you're talking about?

3 **Q.** Well, I'm talking generally. But why don't we
4 just look at GRD-3 of your exhibits.

5 **A.** Okay. I'm there.

6 **Q.** Okay. Good. And in each of the items that
7 are listed on this, on Page 1 of 1, you provided
8 testimony and recommendations regarding the
9 reasonableness or prudence of the utility's activities?

10 **A.** Yes, I did.

11 **Q.** Okay. Well, let's talk --

12 **A.** And this was before the commissions that are
13 stated there in the list.

14 **Q.** Before the public utility commissions that are
15 listed under the heading State Commission?

16 **A.** Yes.

17 **Q.** Okay. Let's talk a little bit about prudence.
18 Prudence reviews by a regulatory commission by
19 definition are retrospective, are they not?

20 **A.** They generally are, although there has been a
21 move to do some real-time prudence in some state utility
22 commission venues.

23 **Q.** Okay. And all of the prudence matters that
24 are discussed on GRD, or referenced on GRD-3 were
25 retrospective reviews?

1 **A.** Not exactly. Let me go back to GRD-3. In the
2 case of the Arkansas Nuclear One Unit 2 steam
3 generators, that was a decision that was being
4 considered by the Arkansas Public Service Commission
5 with regard to Arkansas Power & Light's decision to
6 replace the steam generators before actual work
7 proceeded.

8 **Q.** On whether it should be done.

9 Okay. But the others were retrospective
10 reviews?

11 **A.** No. The same thing would be true in the
12 Maryland case for the replacement of the Calvert Cliffs
13 1 and 2 steam generators.

14 **Q.** Okay. It was in (phonetic) advance.

15 All right. For a prudence review, would a
16 utility's failure to follow its own procedures
17 constitute imprudence?

18 **A.** One would have to look at the totality of
19 information available to be able to make that
20 determination. You could not just simply say prima
21 facie that the, that the utility was prudent --
22 imprudent.

23 **Q.** Okay. So if the company had written
24 established procedures and didn't follow them, that
25 wouldn't make out a case for prudence?

1 **A.** Say that again.

2 **Q.** That would not make out a case for prudence in
3 your opinion?

4 **A.** That may indicate that there is the potential
5 that there is imprudence, but it does not say that there
6 was imprudence.

7 **Q.** Okay. Can there be imprudence for failure to
8 act in the face of circumstances that dictate actions
9 required?

10 **A.** Can there be? That's possible, yes.

11 **Q.** Sure. Okay. Let's take a look for a minute
12 at your testimony on Page 42.

13 **A.** I'm there.

14 **Q.** And the Q and A beginning on Line 15, which
15 discusses Progress's risk management for the Levy
16 project. Do you see that?

17 **A.** Yes.

18 **Q.** And on Lines 17 through 20 you say, "The
19 project team identified risks and prepared a Risk
20 Register to track them." Do you see that?

21 **A.** Yes.

22 **Q.** If a project team member identified a risk,
23 who vetted it?

24 **A.** The project team met and, the team that is the
25 project team associated with the Levy Nuclear Project

1 met to review the risk, added to the register so it was
2 vetted collectively. So, for instance, if it was a
3 licensing issue, Mr. Kitchen (phonetic) or Mr. Miller
4 would have vetted it.

5 Q. As part of the licensing team.

6 A. Yes.

7 Q. Okay. Would any, anybody independent of that
8 team review it?

9 A. How do you mean independent? Of the Levy
10 Nuclear Project or of the licensing team?

11 Q. Of the licensing team.

12 A. They may have, but I don't know for sure.

13 Q. You don't know. You didn't look at that.

14 A. I didn't look at external review of the Risk
15 Register in terms of somebody vetting it. No.

16 MR. BREW: Okay. That's all I have. Thank
17 you.

18 COMMISSIONER EDGAR: Thank you.

19 Mr. Davis.

20 MR. DAVIS: No questions.

21 COMMISSIONER EDGAR: No questions.

22 Mr. Moyle.

23 **CROSS EXAMINATION**

24 **BY MR. MOYLE:**

25 Q. In your summary, you indicated that you looked

1 at how, as I understood it, as how Progress is managing
2 this project and managing their risk with the, with the
3 Levy planned nuclear power plants; correct?

4 **A.** Correct.

5 **Q.** Okay. Wouldn't, wouldn't you agree that in
6 order to make a judgment as to how risk is being
7 managed, that an important component of that would be to
8 know the, the dollar figure to which the risk -- the
9 ultimate dollar figure that people are using to manage
10 risk?

11 **A.** You may not be able to know that. That's the
12 problem with being here now and trying to anticipate
13 what costs might be in the future. That's why you build
14 an estimate.

15 **Q.** Okay.

16 **A.** So you do the best possible job you can in
17 building an estimate to include contingencies to account
18 for the possibility or potential likelihood that some
19 occurrence may happen that will cause that estimate to
20 be higher.

21 **Q.** You would agree that in order to determine
22 either prudence or long-term feasibility, that cost is
23 a, is a critical component of that; correct?

24 **A.** I would agree that it's a, that cost is an
25 important component. But technical feasibility is just

1 as important. Regulatory feasibility is just as
2 important.

3 Q. The -- you would also agree in terms of
4 formulating your, your opinion and judgment that to the
5 extent that you can have more current cost data, that
6 that would better inform your opinion; correct?

7 A. It's what naturally happens in a, in a project
8 is that you conceive the project, you estimate the cost.
9 They have a band of uncertainty associated with them.
10 As time marches on and you procure items and receive
11 bids, you now have an actual price to incorporate into
12 your estimate or budget from which to work. So in that
13 sense, yes, that's, that's what makes sense. There is
14 cost, more cost certainty because you've actually
15 cleared the uncertainty bound (phonetic) into certain as
16 in the case of a fixed price contract, say.

17 Q. Yes, sir. Hypothetically, let's say we're
18 sitting here in 2015 having this annual proceeding and
19 you're testifying about, well, I think that the, that
20 Progress has been reasonably managing cost, you wouldn't
21 anticipate relying on a cost estimate that was done in,
22 you know, in 2009 for the basis of that testimony or
23 2008 for the basis of that testimony. You would want to
24 try to have most current information related to cost for
25 that testimony; correct?

1 **A.** Not necessarily. If the estimate is holding,
2 that is the budget is holding and what you've done is
3 transferred dollars from contingency into the actual
4 expenditure for that, say, item of cost, then, then the
5 estimate that we presented or that the company presented
6 in two thousand and -- what did you say, nine --

7 **Q.** Yes.

8 **A.** -- is still holding, then, and they have
9 processes and procedures to incorporate that cost, what
10 you've done is I think achieved a situation in which the
11 cost uncertainty is less but it's still holding that
12 same budget. So you would have that current
13 information, but it may still be that same original or
14 that current estimate. The current estimate being
15 earlier than the 2015 time frame that we're talking
16 about.

17 **Q.** And it just would depend on whether, whether
18 the cost numbers are tracking correctly or not.

19 **A.** Correct.

20 **Q.** Okay. Now as we sit here today, what
21 understanding do you have with respect to the total cost
22 of the planned nuclear project?

23 **A.** Say that again.

24 **Q.** What understanding, if any, do you have with
25 respect to the total cost for the Levy project as we sit

1 here today?

2 **A.** I understand that the schedule shift has
3 occurred because of the change in the LWA. That,
4 therefore, is causing Progress Energy to renegotiate --
5 not renegotiate -- to establish new contract parameters
6 within the EPC contract to adjust the schedule. But
7 right now we know, we know that it is the current
8 estimate. That is, that is what we know, that is the
9 current information. And that may or may not change
10 depending on the outcome of those negotiates.

11 **Q.** And is that the estimate that you used to
12 formulate your opinion, the current, the current
13 estimate?

14 **A.** That was -- when I did this work was in
15 January and February of this year, so, yes.

16 **Q.** And just so the record is clear, what number
17 is that that you used with respect to formulating your
18 opinion as to the total project cost?

19 **A.** It was approximately \$17 billion.

20 **MR. MOYLE:** Thank you. That's all I have.

21 **COMMISSIONER EDGAR:** Other questions from
22 staff?

23 **MR. YOUNG:** No questions.

24 **COMMISSIONER EDGAR:** Commissioners?

25 Commissioner Skop.

1 **COMMISSIONER SKOP:** Thank you, Madam Chair.

2 Just a quick question. And if you can't
3 answer this or this is not within your scope, I'm happy
4 to reserve it for one of the other witnesses.

5 But in your response to Mr. Moyle's question
6 you mentioned the, the limited work authorization denial
7 by the NRC on Levy 1 and 2; is that correct?

8 **THE WITNESS:** Yes, sir.

9 **COMMISSIONER SKOP:** Okay. Now I guess based
10 upon the prior representations of the NRC regarding its
11 newly improved and streamlined license, licensing
12 process, was it reasonably foreseeable that the NRC
13 would substantially depart from this process by denying
14 the AW -- the LWA in your opinion?

15 **THE WITNESS:** I'm not familiar enough with the
16 workings of the NRC in the current time frame, and I
17 believe Mr. Thompson may be able to better answer that.

18 **COMMISSIONER SKOP:** Okay. All right. Thank
19 you.

20 **COMMISSIONER EDGAR:** Redirect?

21 **MR. ROACH:** No redirect.

22 **COMMISSIONER EDGAR:** No redirect. Okay.
23 Exhibits.

24 **MR. ROACH:** Exhibits, I'd ask that Exhibits
25 91 through 96 be received into evidence.

1 **COMMISSIONER EDGAR:** Okay. Why am I not
2 seeing them? 91, is that what you said?

3 **MR. ROACH:** Yes, ma'am. 91 through 96.

4 **COMMISSIONER EDGAR:** Okay. Staff, help me out
5 here.

6 **MS. CIBULA:** Page 14.

7 **COMMISSIONER EDGAR:** What page?

8 **MS. CIBULA:** Page 14.

9 **MR. ROACH:** Page 14.

10 **COMMISSIONER EDGAR:** Page 14.

11 **COMMISSIONER ARGENZIANO:** I'm sorry. Madam
12 Chair, was it Page 14?

13 **COMMISSIONER EDGAR:** That's what we are -- ah,
14 yes. Okay. There you go. Thank you very much. So
15 Page 14, 91 to 98.

16 **MR. ROACH:** 96, 91 through 96.

17 **COMMISSIONER ARGENZIANO:** Thank you.

18 **COMMISSIONER EDGAR:** 91 to 96. 91 to 96 are
19 entered into the record at this time. Thank you all for
20 getting me to the right page.

21 (Exhibits 91 through 96 admitted into the
22 record.)

23 And the witness is excused. Thank you very
24 much.

25 And you may call your next witness.

1 **MS. TRIPLETT:** Thank you, Madam Chairman. Our
2 next witness is Gary Furman. And I believe he has also
3 been stipulated and excused from appearing at the
4 hearing.

5 **COMMISSIONER EDGAR:** Ah, I see that. Yes. So
6 for Witness Furman and his exhibits that I understand
7 have been stipulated, that remains the agreement of all
8 parties; is that correct? I'm seeing nods. Okay. Then
9 the prefiled testimony of Witness Furman will be entered
10 into the record as though read.

11 Exhibits?

12 **MS. TRIPLETT:** There are no exhibits. And I
13 just wanted to make sure that there were two sets of
14 testimonies, there's a March 2nd and a May 1, and no
15 exhibits.

16 **COMMISSIONER EDGAR:** And both the March 2nd
17 and the May 1 prefiled testimony are entered into the
18 record at this time.

19 **MS. TRIPLETT:** Thank you.

20 **COMMISSIONER EDGAR:** Thank you.

21
22
23
24
25

IN RE: NUCLEAR COST RECOVERY CLAUSE**BY PROGRESS ENERGY FLORIDA****FPSC DOCKET NO. 090009****DIRECT TESTIMONY OF GARY FURMAN
IN SUPPORT OF ACTUAL COSTS****I. INTRODUCTION AND QUALIFICATIONS**

1

Q. Please state your name and business address.

2

A. My name is Gary Furman. My business address is 3300 Exchange Place,
Lake Mary, FL 32746.

3

4

5

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

6

A. I am employed by Progress Energy Florida, Inc. ("PEF" or the
"Company") and my title is Manager, Major Projects in the Generation &
Transmission Construction Department. In this role, I am responsible for
leading a cross-functional, multi-disciplinary team in the development and
execution of the transmission line projects associated with the Levy
Nuclear Plant.

7

8

9

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13

Q. Please summarize your educational background and work experience.

14

A. I have a Bachelor's degree in Mechanical Engineering from the University
of Florida and a MBA from the University of Tampa. I am a licensed
Professional Engineer in the State of Florida. I have worked in the electric

15

16

17

1 utility industry for over 25 years, the last 14 of which have been directly
2 related to electrical transmission line and substation siting and
3 engineering. Prior to assuming my current role, I was the Manager of
4 Line Engineering and Real Estate in the Transmission Operations and
5 Planning Department at Progress Energy Florida. In this role, I was
6 responsible for engineering new transmission lines and the acquisition of
7 new transmission line right of way. Prior to that role, I was the Manager
8 of Substation Engineering in the Transmission Operations and Planning
9 Department at Progress Energy. In this role, I was responsible for
10 engineering new substation facilities and the expansion of existing
11 substation facilities.

12 Prior to joining PEF in March 2003, I was employed by Tampa
13 Electric Company where I held a number of management and engineering
14 positions in the transmission, distribution, environmental and generation
15 departments.

16 **II. PURPOSE AND SUMMARY OF TESTIMONY**

17 **Q. What is the purpose of your direct testimony?**

18 **A.** The purpose of my direct testimony is to support the Company's request
19 for cost recovery pursuant to the nuclear cost recovery rule for the
20 transmission portion of the costs incurred from January 2008 through
21 December 2008 that were related to the construction of the Company's
22 proposed Levy Nuclear Power Plants. I am also adopting the testimony
23

1 filed in Docket 080009 of Dale Oliver, with respect to the actual costs
2 incurred in 2007 for transmission and associated facilities. I understand
3 that the Commission will be reviewing the prudence of the 2007
4 transmission costs in this year's proceeding, and my adoption of Mr.
5 Oliver's testimony will assist the Commission in that review.

6
7 **Q. Do you have any exhibits to your testimony?**

8 **A.** No, I am not sponsoring any exhibits. I am, however, sponsoring the cost
9 portions of Schedules T-6, T-6A, T-6B, and Appendix C, as well as
10 portions of Schedules T-8, T-8A, and T-8B of the Nuclear Filing
11 Requirements ("NFRs"), which are included as part of the exhibits to Will
12 Garrett's testimony. Specifically, I am sponsoring those portions, related
13 to transmission, of Schedule T-6, which provides actual monthly
14 expenditures for site selection, preconstruction and construction costs. I
15 also sponsor the transmission portion (Lines 17 – 22) of Schedule T-8,
16 which lists the contracts executed in excess of \$1.0 million through the
17 end of 2008. Accordingly, I sponsor pages 17 to 22 of Schedule T-8A,
18 which reflects details pertaining to the contracts executed in excess of \$1.0
19 million. I am also sponsoring the transmission portion (Lines 9 – 14) of
20 Schedule T-8B which lists the contracts between \$200,000 and \$1.0
21 million that were executed through the end of 2008.

22 All of the portions of these schedules, which I sponsor, are true and
23 accurate.

1 **Q. Please summarize your testimony.**

2 **A. PEF seeks to minimize pre-licensing expenditures while at the same time**
3 performing the necessary work to maintain the schedule required for the
4 project.

5 To that end, the Company incurred pre-construction and
6 construction costs from January 2008 to December 2008 to complete
7 the work required to site the proposed transmission lines and substations
8 and to complete the necessary analysis and design work required to
9 maintain the proposed schedule for the Levy Nuclear Plant Project (LNP).

10 More specifically, work continued to complete selection of the
11 proposed corridors for the transmission lines and to determine the specific
12 routes for the lines within these corridors. The transmission line portion
13 of the State Site Certification Application (SCA) was developed and the
14 application was submitted to the Florida Department of Environmental
15 Protection (FDEP) on June 2, 2008. The transmission portion of the
16 Federal Nuclear Regulatory Commission Combined Operating License
17 Application (COLA) was developed and submitted to the Nuclear
18 Regulatory Commission (NRC) on July 30, 2008. Engineering work was
19 performed to assist in determining suitable substation sites and for the
20 development of preliminary project schedules and cost estimates.

21 The Company conducted one of, if not the, largest community
22 outreach programs in the history of the state for this project to inform the
23 public and obtain suggestions on transmission routing during 2008. This

1 outreach program included sixteen open house sessions that were held
2 throughout the nine county project area, over 117,000 direct mailings sent
3 to the communities in the project area, and over 3,000 people attending the
4 open house/outreach sessions. Work with the community and local
5 governments through established community working groups also
6 continued throughout the year. The Company also incurred construction
7 costs for the purchase of certain substation property and transmission line
8 easements.

9 As demonstrated in my testimony and the NFR schedules attached
10 to Mr. Garrett's testimony, PEF took adequate steps to ensure that these
11 pre-construction and construction costs were reasonable and prudent. PEF
12 negotiated favorable contract terms under the then-current market
13 conditions and circumstances.

14 For all the reasons provided in my testimony and in the NFR
15 schedules, the Commission should approve PEF's transmission pre-
16 construction and construction costs incurred in 2007 and 2008 as
17 reasonable and prudent pursuant to the nuclear cost recovery rule.
18

19 **III. CAPITAL COSTS INCURRED IN 2008 FOR LEVY NUCLEAR PLANT**

20 **Q. Did the Company incur any transmission-related Site Selection/Pre-**
21 **construction costs for the Levy Nuclear Plant in 2008?**

1 **A.** Yes, as reflected on Schedule T-6, the Company incurred Site
2 Selection/Pre-construction costs in the categories of Line Engineering,
3 Substation Engineering, and Other.

4
5 **Q.** **For the Line Engineering costs, please identify what those costs are**
6 **and why the Company had to incur them.**

7 **A.** As reflected on line 20 of Schedule T-6, the Company incurred Line
8 Engineering costs of \$3,602,300. These costs include the conceptual and
9 preliminary engineering design of the transmission lines and facilities.
10 This engineering work identified the typical size, type, and general
11 locations of various options for the transmission lines and substation
12 facilities necessary to successfully and reliably accommodate the
13 additional power from Levy Units 1 and 2 on PEF's system and to reliably
14 incorporate the plants into the PEF transmission system and the state-wide
15 electric grid. This work allowed the Company to refine the scope,
16 expected schedules, and costs of the proposed system facilities and facility
17 upgrades.

18
19 **Q.** **Did the Company incur any other costs associated with the Line**
20 **Engineering work for the Levy Nuclear Plant Project?**

21 **A.** Yes. The Company incurred costs to perform corridor selection studies to
22 identify corridors that can be permitted and utilized for construction. This
23 work included development of quantitative and qualitative corridor

1 analysis using data developed from ecological, land use and engineering
2 analysis, as well as field work to validate the data collected. The work
3 also involved the development of the documentation, figures, drawings
4 and specifications for the proposed corridors necessary to support the final
5 report, and development of the necessary testimony in support of
6 licensing.

7 The work that defined the proposed transmission corridors was
8 used to prepare the necessary corridor and transmission line and facility
9 information for the submittal of the COLA to the NRC and the SCA to the
10 FDEP. Both applications addressed and described the transmission
11 corridors and the necessary transmission system facilities and upgrades for
12 the LNP. The Company submitted the SCA to the FDEP on June 2, 2008
13 and submitted the COLA to the NRC on July 30, 2008. In 2008, the
14 Company further refined the corridors to establish specific routes for the
15 transmission line Right-of-Way (ROW) and sites for the substation
16 facilities.

17 Also in 2008, PEF incurred costs for engineering studies to support
18 the transmission line and facility designs necessitated by the addition of
19 the Levy units. These studies included an analysis of structure and
20 conductor options to determine cost efficient and reliable structures and
21 wires to be used on the project. A switching study was initiated to
22 determine the necessary design requirements for the switching equipment
23 required for the project.

1 Line Engineering costs were also incurred in 2008 for engineering
2 services to support the review, analysis and revisions as needed to refine
3 associated scopes, cost estimates, and schedules for the Levy
4 Transmission Program's discrete line projects. This work included the
5 review and analysis to support the development of design criteria and
6 specifications for the Levy Transmission Program and engineering support
7 for addressing external and internal Requests for Information (RFI) or
8 Requests for Proposals (RFP) by providing documentation, figures,
9 drawings, and reports.

10 All of these Line Engineering costs were incurred in 2008 to
11 maintain the project schedule for the 2016 in-service date of Levy Unit 1
12 and 2017 in-service date of Levy Unit 2.

13
14 **Q. For the Substation Engineering costs, please identify what those costs**
15 **are and why the Company had to incur them.**

16 **A. As reflected on line 21 of Schedule T-6, the Company incurred Substation**
17 **Engineering costs of \$1,179,857. These costs include the conceptual and**
18 **preliminary engineering design and engineering detail work for**
19 **substations. This work was necessary to identify the number of**
20 **substations, their general location, size and equipment needs required to**
21 **incorporate the Levy nuclear power plants into the PEF transmission**
22 **system and the state-wide electric grid.**

1 Such work was necessary to identify and select the appropriate
2 substation sites and prepare the necessary transmission facility information
3 for the submission of the COLA to the NRC. The application addressed
4 and described the necessary transmission system facilities and upgrades
5 for the Levy nuclear power plants. The Company submitted the COLA to
6 the NRC on July 30, 2008.

7 Substation engineering costs in 2008 include engineering services
8 to support the review, analysis, and revisions to all associated scopes, cost
9 estimates, and schedules for the Levy Transmission program's individual
10 substation and relay and protection projects. This work also included the
11 review, analysis, and implementation of technical studies to support the
12 development of design criteria and specifications and to provide assistance
13 for the Levy Transmission program's engineering quantitative and
14 qualitative efforts to support external and internal RFIs or RFPs by
15 providing documentation, figures, drawings and reports.

16 The Company had to incur these costs in 2008 to ensure that
17 licensing applications were completed timely and the schedule was
18 maintained so the necessary transmission infrastructure will be in place
19 prior to the planned commercial in-service dates of 2016 and 2017 for
20 Levy Units 1 and 2 respectively.

21
22 **Q. For the "Other" costs, please identify what those costs are and why**
23 **the Company had to incur them.**

1 A. As reflected on line 23 of Schedule T-6, the Company incurred "Other"
2 costs of \$3,185,914. These costs included project management, project
3 scheduling, development of contracting strategies and related overhead,
4 public outreach/open house activities, legal services, and other
5 miscellaneous costs associated with planning and siting the transmission
6 projects for the LNP.

7 To explain further, the Company incurred these costs: (1) working
8 with the public and governmental agencies to incorporate their comments
9 into the corridor and route selection studies and include their input in the
10 selection of the proposed transmission corridors; (2) reviewing and
11 providing input to the corridor and routing selection processes and the
12 SCA and COLA applications; and (3) performing project management and
13 scheduling activities, external and community relations support, and
14 consulting support for the development of contracting strategies, which
15 could not be directly attributable to Line Engineering or Substation
16 Engineering.

17 These costs were necessary to maintain the project schedule for the
18 2016 in-service date of Levy Unit 1 and the 2017 in-service date of Levy
19 Unit 2.

20
21 **Q. How did actual Site Selection/Preconstruction capital expenditures for**
22 **January 2008 through December 2008 compare to PEF's**
23 **estimated/actual projection for 2008?**

1 A. Line Engineering and Substation Engineering costs were lower than PEF
2 projected while Other transmission costs were higher than PEF expected.
3 I will explain the reasons for the major (more than \$1 million) variances
4 below.

5
6 **Line Engineering:**

7 Line Engineering capital expenditures were \$3,602,300 which was
8 \$2,499,886 under the estimated/actual projection. This variance was
9 primarily driven by a change in scope that led to a re-sequencing of
10 scheduled engineering activities. The change in scope was made after
11 additional studies and analyses were completed. Also, the Company
12 decided to allow additional time for community outreach efforts to gather
13 input to the siting process. The combination of extending the community
14 outreach activities and the change in scope resulted in lower than expected
15 Line Engineering expenditures for 2008.

16
17 **Substation Engineering:**

18 Substation Engineering capital expenditures were \$1,179,857 which was
19 \$5,238,714 under the estimated/actual projection. This variance was
20 primarily driven by a re-alignment of scheduled engineering activities for
21 the substation projects. It was expected that engineering work would be
22 performed sooner on the Levy Plant Administrative substations and the
23 existing Crystal River Energy Complex (CREC) switchyard. Engineering

1 work was re-sequenced to align with schedule activity refinements and
2 coordination with the planned completion of environmental licensing
3 activities. PEF determined, based on discussions with Crystal River plant
4 and planning personnel, that construction at the CREC site could only
5 occur during plant outages. This resulted in phasing of the planned work
6 to correspond with CREC plant outages and spreading of the CREC work
7 activities over the 2009 to 2015 time frame.

8
9 **Other:**

10 Other capital expenditures were \$3,185,914 which was \$1,443,295 over
11 the estimated/actual projection. This variance was primarily driven by
12 more extensive community outreach activities than was originally
13 projected. Due to the large number of land parcels included in the corridor
14 study areas, and the resulting high number of invitations mailed to
15 impacted property owners for the outreach meetings, it was necessary to
16 hold more open houses as part of the outreach plan than originally
17 contemplated. Costs to conduct the open houses included development of
18 presentation materials, facility rent for the open house venues, labor costs
19 for the participants, including internal and external consultants, mailings,
20 advertisements, and project web site development. The response from
21 these open houses was very positive based on feedback received from the
22 attendees, community leaders, local officials, and media reports.

1 Information obtained from the community in this process was
2 incorporated into the transmission corridor selection process.

3
4 **Q. Did the Company incur any transmission-related Construction costs
5 for the Levy Nuclear Plant in 2008?**

6 **A.** Yes, as reflected on Schedule T-6, the Company incurred Construction
7 costs in the categories of Real Estate Acquisition and Other. The cost
8 reflected in the "Other" category is an accounting adjustment that will be
9 explained in the testimony of Mr. Will Garrett.

10
11 **Q. For the Real Estate Acquisitions costs, please identify what those costs
12 are and why the Company had to incur them.**

13 **A.** As reflected on line 59 of Schedule T-6, the Company incurred "Real
14 Estate Acquisition" costs of \$2,994,450. These costs include the
15 acquisition costs of the new Citrus and Central Florida South substation
16 sites and certain transmission line ROW. PEF incurred costs to acquire
17 five parcels of land for the new Citrus substation project. One parcel of
18 land and a transmission line easement were placed under contract for the
19 new Central Florida South substation project. The purchase deposit for
20 this property was processed in 2008. PEF also acquired an easement for
21 the ROW expansion of the Pinellas-Hillsborough-Polk (PHP) 230kV
22 transmission line rebuild project.

1 These real estate acquisition costs include the siting, survey,
2 appraisals, title commitments, permitting, legal and related costs,
3 ordinance review, and actual purchase costs for the land and easement
4 rights necessary for the transmission facilities for the LNP. These costs
5 are needed to ensure that the ROW and other land upon which the
6 transmission facilities will be located are available when required to
7 maintain the project schedule for the 2016 in-service date of Levy Unit 1
8 and Levy Unit 2 in 2017.

9
10 **Q. How did actual Construction capital expenditures for January 2008**
11 **through December 2008 compare to PEF's estimated/actual**
12 **projection for 2008 costs?**

13 **A.** Substation Engineering and Substation Construction costs were lower than
14 PEF projected. I will explain the reasons for the major (more than \$1
15 million) variances below.

16
17 **Substation Engineering:**

18 PEF did not incur capital expenditures for Substation Engineering in 2008
19 but projected costs of \$2,091,550. At the time PEF projected these costs,
20 the Company expected that engineering activities would occur in 2008 to
21 support the construction at the Levy Plant Administrative substations and
22 the existing CREC switchyard. It was determined, however, that
23 construction activities at the Levy Plant site would not occur until the

1 environmental licensing activities are complete which is expected in late
2 2009 or early 2010. In addition, PEF determined, based on discussions
3 with Crystal River plant and planning personnel, that construction activity
4 at the CREC site could only occur during certain plant outages. This
5 resulted in phasing of the planned work to correspond with CREC plant
6 outages and spreading of the CREC work activities over the 2009 to 2015
7 time frame.

8
9 **Substation Construction:**

10 PEF did not incur any capital expenditures for Substation Construction in
11 2008 but projected costs of \$2,175,212. At the time PEF projected these
12 costs, the Company expected that there would be a need to purchase long
13 lead time substation major equipment items for the Levy Administration
14 Substations and the CREC switchyard expansion projects. The start of
15 construction for these projects was re-sequenced due to licensing,
16 permitting, and plant outage requirements and, therefore, the need to
17 purchase this equipment was deferred.

18
19 **Q. To summarize, were all the costs that the Company incurred in 2008**
20 **for the Levy Nuclear Project reasonable and prudent?**

21 **A.** Yes. The specific cost amounts for the transmission portion of the LNP
22 contained in the NFR schedules, which are attached as exhibits to Mr.
23 Garrett's testimony, reflect the reasonable and prudent costs PEF incurred

1 for the LNP transmission work in 2008. Together with the LNP
2 transmission costs PEF prudently incurred in 2007, PEF (1) obtained a
3 need determination for the LNP; (2) studied and selected a preferred
4 transmission line corridor for the transmission lines; (3) further narrowed
5 the corridor to the specific routes for the transmission lines; (4) developed
6 the transmission portion of the SCA for submittal to the FDEP; (5)
7 developed the transmission portion of the COLA for the submittal to the
8 NRC; (6) performed engineering work for transmission lines and
9 substation sites and developed project schedules and cost estimates; (7)
10 performed extensive community outreach regarding the proposed location
11 of the transmission lines; and (8) purchased land for substation sites and
12 easements for transmission lines. All of these costs were necessary to
13 maintain the project schedule and move the LNP transmission projects
14 forward to successful completion.

15
16 **IV. PROJECT MANAGEMENT AND COST CONTROL OVERSIGHT**

17 **Q. Has the Company implemented any project management or cost**
18 **control oversight mechanisms for the transmission portion of the Levy**
19 **Nuclear project?**

20 **A.** Yes. The Company is using numerous existing policies and procedures to
21 ensure that the transmission costs for the LNP are prudently incurred,
22 managed, and controlled and that the project remains on schedule. The
23 transmission projects associated with the LNP are subject to the same

1 overall Company management as the generation side of the LNP. Mr.
2 Miller describes the LNP management in some detail in his testimony.
3 LNP management is accomplished by adherence to the Company's
4 Integrated Project Plan (IPP) for the LNP. The Company's Project
5 Governance Policy, Execution of Large Construction Projects and
6 Programs Procedure, and Generation and Transmission Construction
7 Guidelines, along with numerous other policies, procedures, and controls,
8 also apply to the Levy transmission projects.

9 To further promote best practices for project management, the
10 Company has created the Project Management Center of Excellence
11 (PMCoE), which will standardize best practices of project management
12 across the Company. The PMCoE will improve Progress Energy's project
13 management approach so that it is more efficient, flexible, and cost
14 effective. Specifically, its goals are to standardize processes, establish a
15 project management career path, provide common training and
16 qualification programs, and adopt best practices from both internal and
17 industry groups. The processes developed by PMCoE will ultimately
18 apply to all Progress Energy projects.

19 The Project Assurance Program Policy and the Project Assurance
20 Program Manual, which implement procedures to identify and document
21 key project decisions, also apply to the LNP transmission projects.
22 Similarly, the Document Management System for the Generation &

1 Transmission Construction Department is used to manage the documents
2 associated with the LNP transmission work.

3 To maintain control over the transmission projects and related
4 work, a detailed schedule is regularly updated. The schedule defines the
5 transmission task order, specific time frame allocated to the task, and the
6 task start and finish dates. The schedule is used to provide management
7 with timely information necessary to make decisions related to the LNP
8 transmission work. The schedule also allows the Company to coordinate
9 LNP transmission work with internal Company departments such as
10 Planning, Engineering, Construction, Energy Control, and the Generating
11 Stations, among others. The schedule further serves as a link between the
12 Company and the Company's contractors and as a management tool with
13 the outside contractors. Various levels of supporting schedules are also
14 developed and used throughout the course of the LNP transmission
15 projects.

16 Other corporate tools support the management of the LNP
17 transmission work. The Oracle Financial Systems/Business Objects
18 reporting tool provides monthly corporate budget comparisons to actual
19 cost information, as well as detailed transaction information. This
20 information, along with other financial accounting data, allows us to
21 regularly monitor the costs of the transmission work compared to budgets
22 and projections and make decisions accordingly to ensure that the costs
23 incurred are reasonable and prudent for the work obtained. Similarly, the

1 PassPort system is used under the Contract Development and
2 Administration Policy to manage contracts for LNP transmission work.
3 This system routes contracts for approval, including contract amendments
4 and work authorizations, and facilitates routing and approval of contractor
5 invoices and payments in accordance with Company policies and
6 procedures.

7
8 **Q. What procedures are used by PEF to ensure the reasonable and**
9 **prudent selection of contractors and vendors for the transmission**
10 **projects for the Levy Units?**

11 **A.** PEF typically uses RFP bidding procedures to ensure that the selected
12 contractors and vendors provide the best value for PEF's customers. In
13 2008, the RFP process was utilized for the Route Selection Study,
14 Conductor Study, Switching Study, and Owner-Engineer contracts. The
15 RFP process was also utilized to award a purchase order for 500kV
16 substation switches to be installed in 2009. Other RFP's started in 2008
17 that will be completed in 2009 include the Light Detection and Ranging
18 (LiDAR) survey, the Crystal River Switchyard Design and Engineering
19 work, and the Acquisition Program Manager (APM).

20 RFPs cannot always be used, however, to obtain services or
21 materials. When deciding to use a sole/single source contractor or vendor,
22 PEF provides sole/single source justifications for not using an RFP for the
23 particular work or material. When PEF contracts with sole/single source

1 contractors or vendors, PEF further ensures that the contracts contain
2 reasonable and prudent contract terms with adequate pricing provisions
3 (including fixed price and/or firm price escalated according to indexes,
4 where possible).

5 Sole/single source contractor or vendor relationships are
6 sometimes necessary to provide the services or materials at all or at the
7 most reasonable cost under the circumstance. To illustrate, in some
8 instances, the particular contractor or vendor has particular experience
9 with the plant or the work required, thus making it advantageous for that
10 vendor to accomplish the work.

11
12 **Q. Does PEF have any mechanisms in place to ensure that the policies
13 and procedures described above are effective?**

14 **A.** Yes, PEF has a Project Assurance Department with support personnel
15 assigned specifically to the project to be involved in key meetings and
16 decision-making discussions. Project Assurance works collaboratively
17 with project personnel to provide advice, support, and guidance to ensure
18 documentation demonstrating the prudence of key decisions is developed,
19 organized, and readily retrievable throughout the project lifecycle. In
20 addition, Project Assurance personnel provide training to ensure that
21 project team members and other stakeholders understand the fundamentals
22 of the regulatory process, prudent decision-making, and the importance of
23 developing timely and thorough project documentation.

1 PEF also uses internal auditing to verify that its program
2 management and cost oversight controls are effective. These internal
3 audits occur regularly for large projects like the Levy Transmission
4 Program. Recommendations and results from Internal Audit reviews are
5 provided to management as well as members of the project team for
6 continuous improvement.

7
8 **Q. Do PEF's policies provide for senior management review of project
9 costs and schedules?**

10 **A.** Yes, the Levy Integrated Nuclear Committee ("LINC"), comprised of
11 Senior Management, reviews key milestones, cost and emergent issue
12 information related to both the Generation and Transmission portions of
13 the LNP on a regular basis. This Committee also documents key project
14 decisions in compliance with Project Assurance policies and procedures.
15 This Committee was chartered by Senior Management and the PEF Board
16 to manage all aspects of planning and execution of the LNP, with clear
17 accountability in functional areas along each phase from design to
18 commercial operation. The LINC serves as a means to ensure proper
19 coordination and appropriate documentation of activities that cross
20 multiple organizational boundaries.

21 Additionally, a monthly summary report is provided to members of
22 Progress Energy Senior Management that highlights financial, schedule,

1 and current issue information. This information is provided in summary
2 format to the Company's Board of Directors on a periodic basis.

3 On-going funding and project review for the transmission projects
4 in the LNP is prepared on a periodic basis for members of Senior
5 Management and presented as an IPP in accordance with the Company's
6 Capital Projects guidance. Detailed project cost and schedule information
7 is monitored regularly by the project management and cost management
8 personnel within the functional department, and monthly reviews of the
9 project status are presented to the Department Vice President.

10
11 **Q. Does this conclude your testimony?**

12 **A.** Yes, it does.
13
14

IN RE: NUCLEAR COST RECOVERY CLAUSE

BY PROGRESS ENERGY FLORIDA

FPSC DOCKET NO. 090009-EI

DIRECT TESTIMONY OF GARY FURMAN

I. INTRODUCTION AND QUALIFICATIONS

1
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17

Q. Please state your name and business address.

A. My name is Gary Furman. My business address is 3300 Exchange Place, Lake Mary, FL 32746.

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

A. I am employed by Progress Energy Florida, Inc. ("PEF" or the "Company") and my title is Manager, Major Projects in the Generation & Transmission Construction Department. In this role, I am responsible for leading a cross-functional, multi-disciplinary team in the development and execution of the transmission line projects associated with the Levy Nuclear Plant.

Q. Please summarize your educational background and work experience.

A. I have a Bachelor's degree in Mechanical Engineering from the University of Florida and a MBA from the University of Tampa. I am a licensed Professional Engineer in the State of Florida. I have worked in the electric

1 utility industry for over 25 years, the last 14 of which have been directly
2 related to electrical transmission line and substation siting and
3 engineering. Prior to assuming my current role, I was the Manager of
4 Line Engineering and Real Estate in the Transmission Operations and
5 Planning Department at Progress Energy Florida. In this role, I was
6 responsible for engineering new transmission lines and the acquisition of
7 new transmission line right of way. Prior to that role, I was the Manager
8 of Substation Engineering in the Transmission Operations and Planning
9 Department at Progress Energy. In this role, I was responsible for
10 engineering new substation facilities and the expansion of existing
11 substation facilities.

12 Prior to joining PEF in March 2003, I was employed by Tampa
13 Electric Company where I held a number of management and engineering
14 positions in the transmission, distribution, environmental and generation
15 departments.

17 II. PURPOSE AND SUMMARY OF TESTIMONY

18
19 **Q. What is the purpose of your direct testimony?**

20 **A.** The purpose of my direct testimony is to support the Company's request
21 for cost recovery pursuant to the nuclear cost recovery rule for certain
22 costs incurred in 2009 for transmission work in support of the Levy
23 Nuclear Project ("LNP"). My testimony will also support the Company's

1 actual/estimated costs for the remainder of 2009 and the projected costs
2 for 2010.

3
4 **Q. Have you previously filed testimony in this docket?**

5 **A.** Yes, I filed testimony on March 2, 2009 in support of the actual costs
6 incurred through December 2008 for the transmission work necessitated
7 by the LNP.

8
9 **Q. Do you have any exhibits to your testimony?**

10 **A.** No, I am not sponsoring any exhibits. I am, however, sponsoring portions
11 of the schedules attached to Mr. Foster's testimony. Specifically, I am
12 sponsoring the cost portions, related to transmission, of Schedule AE-6,
13 AE-6A, AE-6B, AE-8 and AE-8A of the Nuclear Filing Requirements
14 ("NFRs"), which are included as part of Exhibit No. ____ (TGF-1) to Mr.
15 Foster's testimony. Schedule AE-8 is a list of the contracts executed in
16 excess of \$1.0 million that have been executed to date. Schedule AE-8A
17 reflects details pertaining to the contracts executed in excess of \$1.0
18 million.

19 I am also sponsoring the transmission cost portions of Schedule
20 P-6, P-6A, P-8, and P-8A, part of Exhibit No. ____ (TGF-2), which provide
21 similar details for contracts as the AE schedules.

22 These portions of the schedules are true and accurate.

23

1 **Q. Please summarize your testimony.**

2 **A.** From January to March 2009, PEF has incurred reasonable and prudent
3 costs to complete the selection of the proposed routes that will be used for
4 the planned transmission lines for the LNP. Community outreach activities
5 for transmission projects were completed in the first quarter of 2009.
6 Also, certain substation properties were acquired and other right-of-way
7 ("ROW") activities supporting the land acquisition process were
8 performed. Work was also performed related to the development and
9 submittal of several regulatory filings. During 2009, surveying and
10 engineering design work will continue on the proposed lines and
11 substation facilities. Also, certain substation construction activities will be
12 started in 2009. In 2010, principal projected costs include costs associated
13 with the acquisition of transmission line ROWs, surveying, engineering
14 design, and community relations and outreach.

15 PEF has provided reasonable projections for costs that will be
16 incurred during the remainder of 2009 and all of 2010. These projected
17 costs were developed using the best available information to the Company
18 at this time. Thus, the Commission should approve PEF's projections as
19 reasonable.

20
21 **Q. Has the scope of these activities changed since you last filed testimony**
22 **in this Docket?**

1 A. Yes, as explained in Mr. Garry Miller's testimony, based on the U.S.
2 Nuclear Regulatory Commission's ("NRC") treatment of certain work
3 prior to the issuance of the Levy construction and operating license
4 ("COL"), PEF now expects a schedule shift in the commercial operation
5 dates of the LNP. Although the overall schedule impact is not certain at
6 this time, PEF expects the schedule to shift at least 20 months.
7 Accordingly, PEF is reviewing the overall program schedule for the
8 transmission facilities and any potential impact on the transmission
9 portion of the project due to the schedule shift.

10
11 **Q. Have you determined what impact, if any, this schedule shift may**
12 **have on the transmission project schedule?**

13 A. PEF has undertaken a preliminary review of the potential impact of a
14 schedule shift on the transmission portion of the LNP. Our initial review
15 indicates that most construction work, excluding ROW acquisition, will be
16 deferred to accommodate a total LNP schedule shift of at least 20 months.

17
18 **Q. What impact, if any, will the schedule shift have on PEF's 2009 and**
19 **2010 transmission costs?**

20 A. The schedule shift will result in a significant decrease in the amount of
21 engineering and construction costs for the project in 2009 and 2010
22 primarily related to transmission line and substation field engineering and
23 construction labor, material and equipment costs. The actual/estimated

1 and projected figures for both 2009 and 2010, explained in more detail
2 below, reflect these reductions in costs. Although we will be decreasing
3 our LNP transmission engineering and construction spending in 2009 and
4 2010, we plan to continue certain ROW acquisition and engineering
5 activities for the project, which we believe is a reasonable and prudent
6 course of action at this time.

8 III. TRANSMISSION PRE-CONSTRUCTION ACTIVITIES

9 **Q. What pre-construction activities are you undertaking in 2009?**

10 **A.** The principal pre-construction activities to be performed in 2009 include
11 engineering work to develop the designs for clearing, grading, foundations
12 and structures for the proposed transmission lines and engineering
13 activities to develop the detailed designs for the substations, including
14 protection and control (relay) equipment that will support the Levy Units.
15 Activities for route selection, including engineering support of qualitative
16 and quantitative route analysis, field work required to support routing
17 from an engineering perspective, and studies to identify constructible and
18 permittable transmission line routes within PEF's proposed corridors, will
19 also be performed in 2009.

20 Other key activities to be completed in 2009 include support of
21 community outreach/open house sessions in the project area and other
22 activities to perform project management, project scheduling and cost
23 estimating, external community relations activities, development of

1 contracting strategies, legal services, and general activities required to
2 manage the overall transmission work necessitated by the LNP.

3
4 **Q What pre-construction activities do you expect to undertake in 2010?**

5 **A.** In 2010, PEF expects to perform principal activities related to continuing
6 transmission line and substation engineering to support development of
7 the designs for clearing, grading, foundations and structures for the
8 proposed transmission lines and for the substations, including protection
9 and control (relay) equipment, that will support the Levy Units. Other key
10 activities such as project management, project scheduling and cost
11 estimating, external community relations activities, development of
12 contracting strategies, legal services, and general activities required to
13 manage the overall transmission work necessitated by the LNP are
14 expected to continue in 2010.

15
16 **Q. What costs has PEF included in this filing for transmission pre-
17 construction costs?**

18 **A.** PEF has filed actual/estimated 2009 and projected 2010 pre-construction
19 costs for transmission for the LNP. Schedule AE-6 of Exhibit No. ____
20 (TGF-1) shows transmission pre-construction costs for 2009
21 actual/estimated in the following categories: Line Engineering \$6.1
22 million; Substation Engineering \$5.2 million; Clearing \$0.009 million; and
23 Other \$4.7 million. Schedule P-6 of Exhibit No. ____ (TGF-2) breaks

1 down the 2010 projected transmission pre-construction costs into the
2 following categories: Line Engineering \$6.5 million; Substation
3 Engineering \$6.0 million; Clearing \$0.006 million; and Other \$10.9
4 million.

5
6 **Q. Please describe what the projected pre-construction Line Engineering**
7 **costs are and explain why the Company has to incur them.**

8 **A.** These costs include engineering work to develop the designs for clearing,
9 grading, foundations and structures for the proposed transmission lines
10 that will support the Levy Units. These costs also include engineering
11 work for route selection including engineering support of qualitative and
12 quantitative route analysis, field work required to support routing from an
13 engineering perspective, and associated costs for studies to identify
14 constructible and permissible transmission line routes within the Owner's
15 proposed corridors.

16 These pre-construction Line Engineering costs are necessary for
17 the LNP transmission project work with the expected schedule shift of at
18 least 20 months. Because transmission facilities must be designed,
19 constructed, and operational in time for the expected commercial in-
20 service of the LNP, we have preliminarily identified what work must be
21 done to ensure the transmission facilities will be ready with this schedule
22 shift. The pre-construction Line Engineering costs included for 2009 and
23 2010 in this filing reasonably reflect that preliminary assessment.

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Q. Please describe what the pre-construction Substation Engineering costs are and explain why the Company has to incur them.

A. These costs include the engineering work to develop the detailed designs for the substations, including protection and control (relay) equipment, required to support the Levy units. These pre-construction Substation Engineering costs are necessary for the LNP transmission project work with the expected schedule shift of at least 20 months. Because transmission facilities must be designed, constructed, and operational in time for the expected commercial in-service of the LNP, we have preliminarily identified what work must be done to ensure the transmission facilities will be ready with this schedule shift. The pre-construction Substation Engineering costs included for 2009 and 2010 in this filing reasonably reflect that preliminary assessment.

Q. Please describe what the Other category of pre-construction costs include and explain why the Company needs to incur them.

A. For 2009, these costs include activities associated with community outreach, such as open houses, and costs associated with the proposed route selection for the planned transmission lines. In January and February of 2009, Progress Energy held six (6) open house sessions in the project area. These sessions were held in order to gather input from the local communities and to share the plans and schedules for the Levy

1 transmission program. Also included in these costs for 2009 and 2010 are
2 project management, project scheduling and cost estimating support,
3 external community relations support, development of contracting
4 strategies, legal services, related overhead, contingency and general
5 activity costs associated with planning and siting the transmission projects
6 for the LNP. All of these other pre-construction costs are necessary to
7 support the LNP transmission work even with the expected schedule shift.
8

9 **Q. Please describe how the transmission pre-construction cost estimates**
10 **were prepared.**

11 **A.** PEF developed the Line Engineering, Substation Engineering and Other
12 pre-construction cost estimates on a reasonable engineering basis, using
13 the best available engineering and utility market information at the time,
14 consistent with utility industry and PEF practice. These cost estimates
15 used preliminary transmission project plans and project schedules to
16 determine what transmission pre-construction work will be done and when
17 it will be done to ensure that the transmission facilities will be ready and
18 necessary project milestones are met even with the LNP schedule shift.
19

20 **IV. TRANSMISSION CONSTRUCTION ACTIVITIES**

21 **Q. What costs has PEF included in this filing for transmission**
22 **construction costs?**

1 A. PEF has actual/estimated 2009 and projected 2010 Construction costs for
2 transmission for the LNP. Schedule AE-6 of Exhibit No. ____ (TGF-1)
3 shows transmission construction costs for 2009 actual/estimated in the
4 following categories: Real Estate Acquisition \$23.0 million; Substation
5 Construction \$1.6 million; and Other \$0.005 million. Schedule P-6 of
6 Exhibit No. ____ (TGF-2) breaks down the 2010 projected transmission
7 construction costs into the following categories: Substation Engineering
8 \$0.01 million; Real Estate Acquisition \$54.0 million; Substation
9 Construction \$0.3 million; and Other \$0.08 million.

10
11 **Q. Please describe what the Substation Engineering and Substation**
12 **Construction costs are and explain why the Company needs to incur**
13 **them.**

14 A. The company is projecting minimal expenditures for these engineering
15 and construction costs in 2009 and 2010. Such costs include construction
16 for certain substation facilities and related field engineering support for the
17 planned substation and protection and control (relay) work required for the
18 addition of the Levy units. These costs are necessary to ensure that the
19 transmission substations required to support the Levy Units on PEF's
20 transmission system are installed and ready for service even with the LNP
21 schedule shift.

22

1 **Q. Please describe the Real Estate Acquisition costs and explain why the**
2 **Company needs to incur them.**

3 **A.** These costs include the estimated land and ROW acquisition costs
4 necessary for the transmission facilities to support the addition of the Levy
5 Units to PEF's system. These costs include the siting, survey, appraisal,
6 title commitments, legal costs, ordinance review, and actual purchase costs
7 for the land and easements necessary for the transmission facilities for the
8 LNP. These costs are necessary to ensure that the ROW and other land
9 upon which the transmission facilities will be located are available for the
10 LNP.

11
12 **Q. Please describe what the Other costs are and explain why the**
13 **Company needs to incur them.**

14 **A.** These costs include the program management and related overhead,
15 indirects, contingency, escalation and general activity costs associated
16 with siting, designing and constructing the transmission projects for the
17 LNP. Such costs include project management, project scheduling and cost
18 estimating support, external community relations support, contract
19 management and legal services. These construction costs are necessary
20 for the LNP transmission project work with the expected schedule shift of
21 at least 20 months. Because all transmission facilities must be designed,
22 constructed, and operational in time for the expected commercial in-
23 service of the LNP, we have preliminarily identified what work must be

1 done to ensure the transmission facilities will be ready with this schedule
2 shift. The construction costs included for 2009 and 2010 in this filing
3 reasonably reflect that preliminary assessment.
4

5 **Q. Please describe briefly how the transmission construction cost**
6 **estimates were prepared.**

7 **A.** PEF developed these Substation Engineering, Substation Construction,
8 Real Estate Acquisition, and Other transmission construction cost
9 estimates on a reasonable engineering basis, using the best available
10 construction and utility market information at the time, consistent with
11 utility industry and PEF practice. These estimates reasonably reflect the
12 necessary LNP transmission project work with the expected schedule shift
13 of at least 20 months. Because transmission facilities must be designed,
14 constructed, and operational in time for the expected commercial in-
15 service of the LNP, we have preliminarily identified what work must be
16 done to ensure the transmission facilities will be ready and necessary
17 project milestones met with this schedule shift. The construction costs
18 included for 2009 and 2010 in this filing reasonably reflect that
19 preliminary assessment.
20

21 **Q. Does this conclude your testimony?**

22 **A.** Yes, it does.
23

1 **COMMISSIONER EDGAR:** Which brings us to
2 Witness Miller?

3 **MR. BURNETT:** Yes, ma'am.

4 May I proceed, Madam Chair?

5 **COMMISSIONER EDGAR:** Yes, sir.

6 **MR. BURNETT:** Thank you.

7 **GARRY MILLER**

8 was called as a witness on behalf of Progress Energy
9 Florida and, having been duly sworn, testified as
10 follows:

11 **DIRECT EXAMINATION**

12 **BY MR. BURNETT:**

13 **Q.** Sir, would you please introduce yourself to
14 the Commission and provide your business address?

15 **A.** Yes. My name is Garry Miller. My business
16 address is 100 East Davie Street, Raleigh, North
17 Carolina.

18 **Q.** And you've been sworn today; correct, sir?

19 **A.** I have.

20 **Q.** Who do you work for and what is your position?

21 **A.** I work for Progress Energy Carolinas and my
22 position is General Manager, Nuclear Plant Development.

23 **Q.** Have you filed two sets of prefiled direct
24 testimony dated March 2nd and May 1, 2009, in this
25 proceeding?

1 **A.** Yes, I have.

2 **Q.** And do you have any changes to make to your
3 prefiled testimonies?

4 **A.** No, I do not.

5 **Q.** If I asked you the same questions in your
6 prefiled testimonies today, would you give the same
7 answers that are in the prefiled testimony?

8 **A.** Yes, I would.

9 **MR. BURNETT:** Madam Chair, we request that
10 both sets of the prefiled testimony be entered into the
11 record as if they were read today.

12 **COMMISSIONER EDGAR:** Both sets of the prefiled
13 testimony of this witness will be entered into the
14 record as though read.

15 **MR. BURNETT:** Thank you.

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IN RE: NUCLEAR COST RECOVERY CLAUSE**BY PROGRESS ENERGY FLORIDA****FPSC DOCKET NO. 090009****DIRECT TESTIMONY OF GARRY MILLER****I. INTRODUCTION AND QUALIFICATIONS**

1

Q. Please state your name and business address.

2

**A. My name is Garry Miller. My business address is 100 East Davie Street,
TPP 15, Raleigh, NC 27601.**

3

4

5

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

6

**A. I am employed by Progress Energy Carolinas ("PEC") in the capacity of
General Manager – Nuclear Plant Development. As General Manager –
Nuclear Plant Development, I am responsible for the siting, management,
and oversight of all major land purchases, and other contracts necessary
for the construction of Progress Energy Florida's ("PEF's" or the
"Company's") proposed Levy Nuclear Power Plants, the Levy Nuclear
Project ("LNP").**

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**Q. What are your responsibilities as the General Manager - Nuclear
Plant Development?**

15

16

1 A. I am responsible for new nuclear plant development in both the Carolinas
2 and Florida, including Engineering, Licensing, and Project Controls. My
3 responsibilities include, but are not limited to, scheduling, contracts,
4 commercial matters, training, document control, records management, and
5 project management. All the major contracts approved to date on the
6 LNP, and for nuclear plant development, have been under my
7 management and responsibility.

8
9 **Q. Please summarize your educational background and work experience.**

10 A. I have a Bachelor of Science degree in Nuclear Engineering from North
11 Carolina State University. I also have a master's degree in Mechanical
12 Engineering from North Carolina State University. I have approximately
13 thirty years of experience in the nuclear industry. My experience involves
14 engineering and maintenance experience at all of Progress Energy's
15 nuclear plants and the Corporate office. I have held Engineering Manager
16 positions at the Brunswick Nuclear Plant and Robinson Nuclear Plant. I
17 was also the Chief Engineer for Nuclear Generation Group (NGG).
18 Additionally, I was the Maintenance Manager at Progress Energy's Harris
19 Nuclear Plant.

20
21 **II. PURPOSE AND SUMMARY OF TESTIMONY**

22 **Q. What is the purpose of your direct testimony?**

23 A. The purpose of my direct testimony is to support the Company's request
24 for cost recovery and a prudence determination, pursuant to the Nuclear

1 Cost Recovery Rule, for its LNP costs incurred from January through
2 December 2008. I will also explain the major variances between actual
3 LNP costs and those that were projected in the May 1, 2008 filings. I am
4 also adopting the testimony filed in Docket 080009 of Daniel L. Roderick,
5 with respect to the actual site selection costs incurred in 2006 and 2007 for
6 the LNP. I will also be supporting my testimony regarding the land
7 purchases for the LNP, also filed in Docket 080009. I understand that the
8 Commission will be reviewing the prudence of the 2006 and 2007 LNP
9 costs in this year's proceeding, and my adoption of this testimony will
10 assist the Commission in that review.

11
12 **Q. Do you have any exhibits to your testimony?**

13 **A.** No, I am not sponsoring any exhibits. I am, however, sponsoring the cost
14 portions of Schedules T-6, T-6A, T-6B, and Appendix C, as well as
15 portions of Schedules T-8, T-8A, and T-8B of the Nuclear Filing
16 Requirements ("NFRs"), which are included as part of the exhibits to Will
17 Garrett's testimony. I am sponsoring the generation portions of Schedule
18 T-6, T-6A, T-6B, and Appendix C, which provide actual monthly
19 expenditures and variances to projection for site selection, preconstruction
20 and construction costs. Schedule T-7 is a description of the nuclear
21 technology selected in 2006 and re-affirmed in 2007. Schedule T-8 is a
22 list of the contracts executed in excess of \$1.0 million and Schedule T-8A
23 provides details for those contracts. Schedule T-8B reflects details
24 pertaining to contracts executed in excess of \$200,000, but less than \$1

1 million. I am supporting the Generation contracts listed on T-8 (Lines 1 –
2 16), T-8A (Pages 22 – 37), and T-8B (Lines 1 – 8) as Gary Furman, the
3 Transmission witness for PEF, is supporting the Transmission contracts.

4 All of these schedules are true and accurate.

5
6 **Q. Please summarize your testimony.**

7 **A.** PEF seeks to minimize pre-licensing expenditures while at the
8 same time performing the necessary work to maintain the schedule
9 required for the project.

10 The Company requests a prudence determination of its LNP 2006
11 and 2007 costs, as well as a prudence determination and approval of the
12 recovery of its 2008 actual LNP costs. These initial LNP costs, starting in
13 2006 and continuing through 2007 and 2008, in general were incurred in
14 the following LNP activities: (1) determining that nuclear power
15 generation met PEF's need for power and obtaining a need determination
16 for the LNP; (2) identifying a suitable site in Florida for nuclear power
17 plants; (3) selecting an advanced nuclear power reactor technology type
18 for construction; (4) purchasing the necessary land for the LNP generation
19 structures and related facilities; (5) developing and submitting to the
20 Florida Department of Environmental Protection (DEP) the Site
21 Certification Application (SCA) and developing information for other
22 environmental permits for the LNP; (6) developing and submitting to the
23 Nuclear Regulatory Commission (NRC) a Combined Operating License
24 Application (COLA) for the addition of new baseload generation nuclear

1 power plant units in Florida; (7) securing and procuring certain long lead-
2 time equipment necessary to meet project schedules; and (8) obtaining an
3 Engineering, Procurement, and Construction (EPC) contract for the LNP.
4 Senior Management provided its initial approval of the project in
5 accordance with the Company's Project Evaluation and Authorization
6 Process in March of 2006. The Company completed its reactor
7 technology evaluation in 2006, which it re-affirmed in 2007. We
8 completed site evaluation work in 2007.

9 In September 2007, the project authorization was revised and
10 approved by Senior Management. This revision increased the LNP
11 authorization for 2007 spending by \$42.6 million for the Levy County Site
12 land acquisition and adjacent land required for access roads, a heavy
13 hauling route, and transmission access corridors. Also, in 2007, PEF
14 initiated the need, SCA, and COLA processes and this work continued
15 into 2008 when the Company made the three filings with the PSC, DEP,
16 and NRC, respectively.

17 In April 2008, a second revision to the Project Authorization was
18 approved. This approval incorporated the terms of the approved Letter of
19 Intent for Long Lead Equipment. In order to maintain the Levy project
20 schedule, and to lock in certain equipment pricing on favorable terms,
21 certain procurement and engineering activities had to start in early 2008.
22 By executing the terms of the Letter of Intent with Westinghouse and
23 Shaw Stone & Webster, PEF established the necessary terms and
24 conditions for those activities. The revision also included the

1 development of price books in order to determine and document both
2 nuclear island and site-specific project estimated costs.

3 As demonstrated in my testimony and the NFR schedules attached,
4 PEF took adequate steps to ensure that these pre-construction and
5 construction costs were reasonable and prudent. PEF negotiated favorable
6 contract terms under the then-current market conditions and
7 circumstances. Therefore, the Commission should approve PEF's costs
8 incurred from 2006 to 2008 as reasonable and prudent pursuant to the
9 Nuclear Cost Recovery Rule. These costs were necessary to move the
10 LNP forward toward the completion and operation of Levy Units 1 and 2.
11

12 **III. CAPITAL COSTS INCURRED IN 2008 FOR LEVY NUCLEAR PLANT**

13 **Q. Did the Company incur any generation-related Site Selection and**
14 **Preconstruction costs for the Levy Nuclear Plant in 2008?**

15 **A.** Yes, as reflected on Schedule T-6, the Company incurred Site Selection
16 and Preconstruction costs in the categories of License Application,
17 Engineering, Design and Procurement, and On-Site Construction
18 Facilities.

19
20 **Q. For the License Application costs, please identify what those costs are**
21 **and why the Company had to incur them.**

22 **A.** As reflected on line 3 of Schedule T-6, the Company incurred License
23 Application costs of \$33,368,472. One category of License Application
24 costs incurred in 2008 was the costs necessary to complete and submit the

1 Levy COLA to the NRC. The Levy COLA was submitted July 30, 2008
2 and Docketed by the NRC on October 6, 2008. After docketing, the Phase
3 2 COLA work also commenced. This work involves responses to NRC
4 Requests for Additional Information (RAI's) and NRC Audits.

5 PEF also incurred costs in connection with its SCA, which was
6 completed and submitted to the DEP on June 2, 2008. Along with the
7 SCA, PEF incurred costs in 2008 for other environmental and permitting
8 activities such as (1) Wetlands delineation, (2) the early Environmental
9 Review Permit for construction of a barge slip, (3) design and engineering
10 of a heavy hauling road bridge and a heavy hauling road up to the
11 Highway 40 crossing, and (4) the U.S. Army Corps of Engineers review
12 and approval of 404 (Clean Water Act) permits that will be required to
13 support the Levy site development.

14 PEF incurred further costs for the Levy Site Regional Logistical
15 and Site Transportation Study. This Study addressed the economic and
16 schedule impact associated with transportation alternatives, and was
17 completed in 2008. As a result of this Study, PEF decided to utilize an
18 alternate shipping means other than rail.

19 PEF also incurred costs for various land use work for the LNP in
20 2007 and 2008. As a result of this work, the Levy County Comprehensive
21 Land Use Amendment was approved on March 18, 2008, and the Levy
22 site "Special Exception Use Permit" Zoning Application was approved on
23 September 3, 2008. Plans were finalized for Grout Testing and Roller
24 Compacted Concrete Testing at the Levy site. This testing supports the

1 NRC COLA review by mitigating the risk of delay in responding to NRC
2 RAI questions related to Levy geotechnical items.

3
4 **Q. For the Engineering, Design and Procurement costs, please identify
5 what those costs are and why the Company had to incur them.**

6 **A.** As reflected on line 4 of Schedule T-6, the Company incurred
7 Engineering, Design, and Procurement costs of \$110,684,010. In order to
8 maintain a 2016 nuclear option for PEF, certain procurement and
9 engineering activities were required to begin in early 2008. Specifically,
10 on March 28, 2008, PEF executed a letter of intent (LOI) with
11 Westinghouse and Shaw Stone & Webster. Executing the terms of the
12 Letter of Intent with Westinghouse and Shaw Stone & Webster provided
13 Progress Energy with the necessary terms and conditions to execute and
14 maintain the project schedule. PEF's Senior Management and Board of
15 Directors approved the LOI authorizing payments for these procurement
16 and engineering activities.

17
18 **Q. Please explain why the Company decided to negotiate and contract
19 with the Consortium for its nuclear reactor.**

20 **A.** As explained in the need determination proceeding, as well as last year's
21 nuclear cost recovery clause, the Company undertook a detailed analysis
22 to select the technology for the new nuclear plants. In 2008, PEF filed a
23 need determination for two AP1000 units. After the Commission
24 approved this need determination, the Company continued and then

1 completed negotiations with the technology's sole provider,
2 Westinghouse, and its preferred construction vendor, Shaw Stone &
3 Webster (together the "Consortium") for the EPC contract.
4

5 **Q. What is the status of the EPC contract?**

6 **A.** PEF signed the EPC contract with the Consortium on December 31, 2008,
7 after negotiations throughout 2007 and 2008. Costs were incurred by the
8 Consortium for the EPC negotiations to develop price books. These price
9 books helped determine and document both nuclear island and site-
10 specific LNP project estimated costs. The EPC contract project scope is
11 based on an Engineering, Procurement, and Construction offer between
12 PEF and the Consortium. The Consortium will provide contracted
13 services to engineer, procure, and construct two Advanced Passive Light
14 Water reactors at the Levy Site. The EPC contract scope also includes
15 design finalization of the standard AP1000 Power Block, site-specific
16 detailed design, and construction of the Levy Nuclear Steam Supply
17 System ("NSSS"), and balance of plant structures (turbine generator, etc.),
18 including site buildings/structures/systems (such as cooling tower make-
19 up intake structure, mechanical cooling towers, etc.).
20

21 **Q. For the On-Site Construction Facilities costs reflected on Schedule T-**
22 **6, please identify what those costs are and why the Company had to**
23 **incur them.**

1 A. As reflected on line 7 of Schedule T-6, the Company incurred On-Site
2 Construction Facilities costs of \$401,538. PEF incurred the On-Site
3 Construction Facility costs to purchase, install, and equip an office for
4 individuals supporting Levy nuclear plant development.

5
6 **Q. How did actual Site Selection and Preconstruction capital**
7 **expenditures for January 2008 through December 2008 compare to**
8 **PEF's estimated/actual projection costs for 2008?**

9 A. The LNP actual Site Selection and Preconstruction capital expenditures
10 for 2008 were lower than PEF projected. The reasons for the major (more
11 than \$1 million) variances are provided below.

12
13 **License Application:**

14 License Application capital expenditures were \$33,368,472, which was
15 \$4,069,708 under the estimated/actual projection. This variance is
16 primarily driven by lower than expected NRC fees.

17
18 **Engineering & Design:**

19 Engineering & Design capital expenditures were \$110,684,010, which was
20 \$56,854,990 under the estimated/actual projection. This variance was
21 primarily driven by the fact that EPC Contract negotiations and approval
22 extended into December 2008. As a result, additional payments for
23 procurement and detailed design activities were rescheduled from 2008 to
24 2009.

1

2

On-Site Construction Facilities:

3

On-Site Construction Facilities capital expenditures were \$401,538, which

4

was \$3,428,462 under the estimated/actual projection. This variance was

5

primarily driven by the decision to minimize On-Site Construction Facility

6

expenditures pending the execution of the EPC contract, which occurred

7

December 31, 2008. Minimizing these activities does not impact the

8

overall project schedule.

9

10

Q. Did the Company incur any Generation-related Construction costs for the Levy Nuclear Plant in 2008?

11

12

A. Yes, as reflected on Schedule T-6, the Company did incur minimal

13

Construction costs for On-Site Construction Facilities but did not incur

14

Construction costs for Real Estate Acquisitions. The schedule reflects a

15

negative value for Real Estate Acquisitions, which will be explained in the

16

testimony of Will Garrett.

17

18

Q. How did actual Construction capital expenditures for January 2008 through December 2008 compare to PEF's estimated/actual projection costs for 2008?

19

20

21

A. Actual Construction capital expenditures for 2008 are less than PEF

22

projected. The only major (more than \$1 million) variance was for Real

23

Estate Acquisitions costs with expenditures that were (\$115,764) which

24

was \$5,158,703 under the estimated/actual projection. This variance was

1 primarily driven by our decision to revise our plans for bulk quantity
2 deliveries to the Levy site. At the time of the May 2008 filing, PEF
3 anticipated that it would have additional land acquisition needs to allow
4 rail access to the plant. During 2008, the land purchase requirements were
5 revised based on a Logistical and Transportation Plan Study that
6 determined that barge and truck delivery of bulk quantities is preferable to
7 rail delivery.

8
9 **IV. O&M COSTS INCURRED IN 2008 FOR LEVY NUCLEAR PLANT**

10 **Q. Did the Company incur any Generation-related Operation &**
11 **Maintenance (O&M) costs for the Levy Nuclear Plant in 2008?**

12 **A.** Yes, as reflected on Schedule T-4, the Company incurred O&M costs in
13 the amount of \$1,571,800. The majority of these costs were incurred in
14 connection with the NuStart Energy Development, LLC program which is
15 a consortium of utilities with the sole purpose of sharing in the costs to
16 develop and obtain Combined Operating Licenses (COLs) for new reactor
17 technologies and to complete the design for these technologies.

18
19 **Q. How did actual Nuclear Generation CCRC recoverable O&M**
20 **expenditures for January 2008 through December 2008 compare to**
21 **PEF's estimated/actual projection as presented in previous testimony**
22 **and exhibits?**

23 **A.** Nuclear Generation CCRC recoverable O&M expenditures were
24 \$1,571,800 which was \$1,566,350 over the estimated/actual projection.

1 This variance is primarily driven by \$1,448,042 in costs for the NuStart
2 program.

3
4 **Q. To summarize, were all the costs that the Company incurred in 2008**
5 **for the Levy Nuclear Project reasonable and prudent?**

6 **A.** Yes, the specific cost amounts for the LNP contained in the NFR
7 schedules, which are attached as exhibits to Mr. Garrett's testimony,
8 reflect the reasonable and prudent costs PEF incurred for work in 2008.
9 Together with the LNP costs PEF prudently incurred in 2006 and 2007,
10 PEF (1) determined that nuclear power generation met PEF's need for
11 power and obtaining a need determination for the LNP; (2) identified a
12 suitable site in Florida for nuclear power plants; (3) selected a reasonable
13 and prudent advanced nuclear power reactor technology type for
14 construction; (4) purchased the necessary land for the LNP generation
15 structures and related facilities and obtained necessary land use
16 designations; (5) developed and submitted to the DEP the SCA and
17 developed information for other environmental permits for the LNP; (6)
18 developed and submitted to the NRC a COLA for the LNP and provided
19 engineering support for the NRC review of that application; (7) securing
20 and procuring certain long lead-time equipment necessary to meet project
21 schedules; and (8) obtained an EPC contract for the LNP. All of these
22 costs were necessary to move the LNP forward to successful completion.
23
24

1 **V. PROJECT MANAGEMENT AND COST CONTROL OVERSIGHT**

2 **Q. Has the Company implemented project management and cost control**
3 **oversight mechanisms for the Levy project?**

4 **A.** Yes. The Company is utilizing several policies and procedures to ensure
5 that the costs for the LNP are reasonably and prudently incurred and that
6 the project remains on schedule. The LNP is being undertaken by the
7 Company consistent with its Project Management Program Manual, which
8 has been in place at the Company and used to manage capital projects
9 since early in this decade. The LNP was approved in accordance with the
10 Company's Project Evaluation and Authorization Process. This
11 evaluation and project authorization process has been in place at the
12 Company for many years. The generation portion of the Levy project is
13 subject to the same overall Company management as the transmission
14 portion of the LNP that is discussed in the testimony of Mr. Furman. This
15 is accomplished through adherence to the Company's Integrated Project
16 Plan (IPP) for the LNP. Finally, the LNP is subject to the Progress Energy
17 Project Governance Policy, which also has been in place for many years.

18
19 **Q. Can you describe some of the project management and cost control**
20 **policies or procedures in the Company's project management**
21 **documents that are being used to manage the Levy project and**
22 **control project costs?**

23 **A.** Yes. PEF has several control mechanisms in place to manage the LNP
24 and the costs incurred on the project. By utilizing these policies, PEF is

1 able to effectively keep the LNP on schedule and ensure that costs
2 incurred are reasonable and prudent. For example, the LNP management
3 team has regular, internal meetings. These regular meetings allow the
4 project management team to monitor the progress of the project and its
5 costs, and to incorporate the collective knowledge and experience of the
6 team in addressing the scope of the work, the cost of the work,
7 engineering and construction implementation of the work items, and
8 schedule performance. The status of work on the COLA and SCA
9 applications is discussed. Risk management is also discussed and
10 addressed. Finally, project management expectations are communicated
11 and implemented by the LNP management team.

12 PEF's LNP Management Team also meets regularly with outside
13 contract vendors working on the project to review the contract scope of
14 work, engineering and construction implementation of that work scope,
15 and the schedule for the work under the vendor contracts. Contract
16 requisitions, purchase orders, and invoices are discussed. Project
17 management expectations are communicated to the outside vendors. By
18 maintaining supervision over the project, project schedule, and scope of
19 work performed by outside vendors, PEF is able to anticipate and manage
20 scope changes, if any, and project expenditures. There are other regular
21 project reviews as well. LNP Financial Services personnel prepare
22 monthly Cost Management Reports that include all contract, labor,
23 equipment, material and other project cost transactions recorded to the
24 LNP. Financials included in the report include comparison of actual costs

1 to budget, with explanations for any variances. These reports are regularly
2 reviewed by the LNP management team.

3 PEF also has regular PEF Finance Committee meetings, in which
4 management reviews the LNP project costs. Prior to these meetings,
5 responsible operations managers and Finance Management for the
6 organization review various monthly cost and variance analysis reports for
7 the capital budget. Variances from project budget or projections are
8 reviewed and any discrepancies are also identified, and corrections made
9 as needed. The specific reports used are the Cost Management Reports
10 produced by PEF Accounting. All cost reporting for the LNP is tied back
11 to the Cost Management Reports, which are tied back to the Legal Entity
12 Financial Statements. In addition to the monthly Finance Committee
13 meetings, Senior Management periodically reviews the LNP to monitor its
14 cost and ensure that it is on schedule.

15 Additionally, the Company has developed the Levy Integrated
16 Nuclear Committee ("LINC"), which is comprised of PEF leaders with
17 organizational accountability for areas that support the LNP. The group
18 helps coordinate activities that cross multiple organizational areas because
19 of the integrated nature of the LNP. LINC schedules meetings at least
20 monthly to review project activities, evaluate business conditions, address
21 emerging issues, and discuss agenda items. LINC is intended to serve at
22 this time as the single point for management oversight of all phases of the
23 project.
24

1 **Q. Has the Company developed a separate organization to specifically**
2 **oversee and manage the Levy project?**

3 **A.** Yes, to effectively manage the EPC contract and the entire Levy project,
4 Progress Energy has formed a new department, Nuclear Plant
5 Development (NPD). This organizational realignment will effectively
6 support the state-of-the-art plant portion of the Company's balanced
7 solution. NPD will also provide a concentrated leadership focus on the
8 LNP that is separate and distinct from the ongoing Steam Generator
9 Replacement (SGR) and Extended Power Uprate (EPU) at PEF's existing
10 nuclear plant, Crystal River 3. The new Department reports directly to
11 Jeff Lyash, the President and CEO of Progress Energy Florida.

12 NPD will continue to work under the Nuclear Generation Group
13 (NGG) procedures, as applicable. As a result of these changes, the NPD
14 LNP areas are transitioning to an organization that will experience rapid
15 growth. The leadership structure of the new NPD organization has been
16 designed, including the identification of phases from the first quarter 2009
17 through completion of the project, when it will transition back to a
18 traditional NGG plant organization. Analyses of Individual Contributor
19 (IC) needs are in progress, starting with the first quarter of 2009, and then
20 will be followed by IC analysis for future phases of the project. A
21 significant amount of job content questionnaire (JCQ) development,
22 recruiting, interviewing, and hiring is planned for NPD.

23 In addition, the Company is in the process of making significant
24 revisions to the Project Execution Plan, establishing EPC implementing

1 procedures, and developing broader NPD Implementing procedures. My
2 group will also update its Risk Management Processes to continue
3 development of the integrated schedule, enhance its Performance
4 Monitoring Report, and align with the Project Management Center of
5 Excellence Standards (PMCoE). The PMCoE is an organization created
6 by Progress Energy to instill best practices of project management across
7 the Company. PMCoE will improve project management practices by
8 standardizing processes, establishing a project management career path,
9 providing common training and qualifications programs, and adopting best
10 practices from both internal and industry groups.

11
12 **Q. Does PEF continually review and revise its policies and procedures for**
13 **the Levy project?**

14 **A.** Yes, company procedures are reviewed and revised on an ongoing basis.
15 In 2008, approximately 50 corporate and NGG procedures that the LNP
16 adheres to were revised. Two key examples that are associated with how
17 the Project is managed and how Quality Assurance is implemented are the
18 NGG-Project Management Program Manual and the NPD QA plan, which
19 were both revised in 2008.

20 In addition, as previously discussed, the Nuclear Plant
21 Development Department will make a significant update to the Project
22 Execution Plan in 2009, now that the EPC contract has been executed.
23 Initial work on updating the plan has started. Nuclear Plant Development
24 is also in the process of developing additional implementing procedures in

1 2009. The Levy EPC Contract Implementing Procedure Development
2 Plan identifies 33 tasks such as procedure development for Invoice
3 Validation & Processing, Change Control, and Cost & Schedule
4 Performance Analysis activities. Broader NPD processes that will require
5 implementing procedures will be developed. Also, in 2009 Progress
6 Energy's Project Management Center of Excellence organization will be
7 developing and implementing procedures that will be standard for the
8 Company. In January 2009, PJM-SUBS-00001, Achieving Excellence in
9 Project Management procedure was issued. The purpose of this document
10 is to provide guidance to project teams regarding standard processes
11 endorsed by the Company that exhibits excellence in project management.
12 The procedure includes additional procedures that will be established
13 related to project management processes.

14
15 **Q. Are employees involved in the Levy Project trained in the Company's**
16 **project management and cost control policies and procedures?**

17 **A.** Yes, they are. PEF's project management team for the Levy project has
18 been trained in these Company policies. Our employees with
19 responsibilities for managing capital projects receive training on the
20 Company's project management and cost control policies and procedures.
21 Also, when we decide to commence a major capital project like the Levy
22 project, additional training is provided as a reminder of the Company's
23 policies and procedures. This training was provided to the members of the
24 Levy project management team. Also, members of the Levy project

1 management team have experience implementing these project
2 management and cost control policies and procedures successfully on
3 other Progress Energy projects.

4
5 **Q. You mentioned outside vendors on the Levy project. How does the**
6 **Company ensure that its selection and management of outside**
7 **vendors is reasonable and prudent?**

8 **A.** First, a requisition is created in the Passport Contracts module for the
9 purchase of services. The requisition is reviewed by the appropriate
10 Contract Specialist in Corporate Services, or field personnel on the Levy
11 project, to ensure sufficient data has been provided to process the contract
12 requisition. The Contract Specialist prepares the appropriate contract
13 document from pre-approved contract templates in accordance with the
14 requirements stated on the contract requisition.

15 The contract requisition then goes through the bidding or
16 finalization process. Once the contract is ready to be executed, it is
17 approved online by the appropriate levels of the approval matrix as per the
18 Approval Level Policy, and a contract is created. Contract invoices are
19 received by the LNP managers. The invoices are validated by the project
20 managers and Financial Services Team. Payment Authorizations
21 approving payment of the contract invoices are entered and approved in
22 the Contracts module of the PassPort system.

23 When selecting vendors for the LNP, PEF utilizes bidding
24 procedures through a Request for Proposal ("RFP") when possible for the

1 particular services or material needed to ensure that the chosen vendors
2 provide the best value for PEF's customers. When an RFP cannot be
3 used, PEF ensures that the contracts with the sole source vendors contain
4 reasonable and prudent contract terms with adequate pricing provisions
5 (including fixed price and/or firm price, escalated according to indexes,
6 where possible). When deciding to use a sole source vendor, PEF
7 documents a sole source justification for not doing an RFP for the
8 particular work.

9 In those instances where a sole source vendor must be used, there
10 is a justification for choosing that vendor which makes it advantageous for
11 that vendor to perform the work. This occurred, for example, with PEF's
12 decision to execute the EPC contract with the Consortium. PEF selected
13 the AP1000 as its nuclear reactor technology after completing a thorough
14 and extensive evaluation of vendor proposal responses received from three
15 potential vendors. The factors evaluated included technical and
16 operational requirements for licensing, design, construction, and capability
17 input by the vendors. After the technology vendor, Westinghouse and
18 Shaw Stone & Webster, was selected pursuant to this analysis, there was
19 no need to competitively bid for the EPC contract.
20

21 **Q. Does the Company verify that the Company's project management**
22 **and cost control policies and procedures are followed?**

23 **A.** Yes, it does. PEF uses internal audits to verify that its program
24 management and oversight controls are in place and being implemented.

1 Internal audits are conducted on outside vendors. During 2008 multiple
2 planned audits were completed, including the AP1000 EPC Contract
3 Review, the Levy Cost Model Audit, the Levy County Data Repository
4 Audit, and cost recovery rule compliance. In addition, several audits are
5 planned in 2009, including an EPC Controls Audit, Levy Project Controls
6 Audit, and Cost Recovery Rule Compliance Audit. The Company's
7 project management policies themselves, included in the Company project
8 management documents that I have described above, also contain their
9 own mechanisms to ensure that they are followed and effectively
10 implemented.

11
12 **Q. Are the Company's project management and cost control policies and**
13 **procedures on the Levy project reasonable and prudent?**

14 **A.** Yes, they are. These project management policies and procedures reflect
15 the collective experience and knowledge of the Company. As a result,
16 Company employees have, in preparing the policies and procedures
17 reflected in the Company's major capital project management documents
18 that I have identified above, incorporated their experience and knowledge
19 of project management policies and procedures that work within the
20 Company and within the industry. These policies and procedures have
21 also been tested by the Company on other capital projects. Any lessons
22 learned from those projects have been incorporated in the current policies
23 and procedures. We believe, therefore, that our project management

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policies and procedures are consistent with best practices for capital project management in the industry.

Q. Does this conclude your testimony?

A. Yes, it does.

IN RE: NUCLEAR COST RECOVERY CLAUSE**BY PROGRESS ENERGY FLORIDA****FPSC DOCKET NO. 090009****DIRECT TESTIMONY OF GARRY MILLER****I. INTRODUCTION AND QUALIFICATIONS**

1 **Q. Please state your name and business address.**

2 **A.** My name is Garry Miller. My business address is 100 East Davie Street,
3 TPP 15, Raleigh, NC 27602.
4

5
6 **Q. By whom are you employed and in what capacity?**

7 **A.** I am employed by Progress Energy Carolinas ("PEC") in the capacity of
8 General Manager – Nuclear Plant Development ("NPD"). As General
9 Manager – Nuclear Plant Development, I am responsible for the siting,
10 licensing, engineering, construction, and overall management of Progress
11 Energy Florida's ("PEF's" or the "Company's") proposed Levy Nuclear
12 Power Plants, the Levy Nuclear Project ("LNP").
13

14 **Q. What are your responsibilities as the General Manager - Nuclear**
15 **Plant Development?**

16 **A.** I am responsible for new nuclear plant development in both the Carolinas
17 and Florida, including the siting, licensing, engineering, construction and

1 overall management of the Levy Nuclear Project. Specifically, my
2 responsibilities include, but are not limited to, scheduling, contracts,
3 commercial matters, training, document control, records management, and
4 project management. All the major contracts approved to date on the
5 LNP, and for Nuclear Plant Development, have been under my
6 management and responsibility.
7

8 **Q. Please summarize your educational background and work experience.**

9 **A.** I have a Bachelor of Science degree in Nuclear Engineering from North
10 Carolina State University. I also have a Master's degree in Mechanical
11 Engineering from North Carolina State University. I have approximately
12 thirty years of experience in the nuclear industry. My experience involves
13 engineering and maintenance experience at all of Progress Energy's
14 nuclear plants and the corporate office. I have held Engineering Manager
15 positions at the Brunswick Nuclear Plant and Robinson Nuclear Plant. I
16 was also the Chief Engineer for Nuclear Generation Group ("NGG").
17 Additionally, I was the Maintenance Manager at Progress Energy's Harris
18 Nuclear Plant.
19

20 **II. PURPOSE OF TESTIMONY**

21 **Q. What is the purpose of your direct testimony?**

22 **A.** The purpose of my direct testimony is to support the Company's request
23 for cost recovery pursuant to the nuclear cost recovery statute and rule for

1 certain costs either already incurred or to be incurred in 2009 for the LNP.
2 My testimony will also support the Company's actual/estimated and
3 projected costs for the remainder of 2009 and 2010. Finally, my testimony
4 explains why the LNP is feasible, pursuant to Rule 25-6.0423(5)(c)5,
5 F.A.C.

6
7 **Q. Have you previously filed testimony in this docket?**

8 **A.** Yes, I filed testimony on March 2, 2009 in support of the actual costs
9 incurred in 2008 for the LNP.

10
11 **Q. Do you have any exhibits to your testimony?**

12 **A.** Yes, I am sponsoring the following exhibits:

- 13 ● Exhibit No. __ (GM-1), which is an updated fuel forecast; and
- 14 ● Exhibit No. __ (GM-2), which is an updated environmental forecast.

15 I am also sponsoring portions of the schedules attached to Thomas G. Foster's
16 testimony. Specifically, I am sponsoring the cost portions of Schedule AE-6, as
17 well as Schedules AE-6A, AE6B, and AE-7 through AE-8A of the Nuclear Filing
18 Requirements ("NFRs"), included as part of Exhibit No. __ (TGF-1) to Thomas
19 G. Foster's testimony. Schedule AE-7 is a description of the nuclear technology
20 selected. Schedule AE-8 is a list of the contracts executed in excess of \$1.0
21 million that have been executed to date. Schedule AE-8A reflects details
22 pertaining to the contracts executed in excess of \$1.0 million.

1 I am also sponsoring the cost portions of Schedule P-6, as well as
2 Schedules P-6A, P-7, P-8, and P-8A, part of Exhibit No. __ (TGF-2) to Mr.
3 Foster's testimony, which provide similar details for cost, technology selected,
4 and contracts as the AE schedules do, as well as Appendix B.

5 These exhibits and all of these schedules are true and accurate.

6
7 **III. SUMMARY OF LNP AND TESTIMONY.**

8 **Q. Please briefly describe the Levy Nuclear Project (LNP).**

9 A. The LNP involves the planned construction of two state-of-the-art Westinghouse
10 AP1000 Advanced Passive nuclear power plants in Levy County, Florida and
11 associated transmission facilities to meet the Company's generation capacity
12 needs. The LNP will provide needed base load generation from a clean, carbon-
13 free generation resource that enhances the Company's fuel diversity and reduces
14 PEF's and the State of Florida's dependence on fuel oil and natural gas to
15 generate electricity.

16
17 **Q. What major milestones for the Levy Nuclear Project were completed in**
18 **2008?**

19 A. On March 11, 2008, PEF filed a petition with this Commission for an affirmative
20 determination of need for the proposed Levy Units 1 and 2 nuclear power plants
21 together with the associated facilities including transmission lines and substation
22 facilities. This filing followed a detailed reactor technology evaluation and
23 update and the selection of the Westinghouse AP1000 nuclear power plant

1 technology for the LNP. This filing also followed a detailed analysis of available
2 sites and the selection and purchase of the current site for the LNP in Levy
3 County. This Commission voted to affirm the need for the LNP on July 15, 2008
4 and issued its Order granting the determination of need on August 12, 2008.

5 On March 28, 2008, the Letter of Intent ("LOI") was signed with
6 Westinghouse for long lead components for the LNP. Negotiations continued
7 with Westinghouse and Shaw, Stone & Webster (the "Consortium") for an
8 Engineering, Procurement, and Construction ("EPC") contract. An EPC contract
9 with the Consortium for the LNP was ultimately executed on December 31, 2008.

10 Additionally, PEF obtained amendments to the Levy County
11 Comprehensive Land Use Plan. In September 2008, Levy County approved a
12 Special Exception Use Permit zoning application for LNP, as provided for under
13 an amendment to the Levy County Land Development Plan made in 2007 for
14 generating facilities. PEF also prepared and filed on June 2, 2008 its Site
15 Certification Application ("SCA") with the Florida Department of Environmental
16 Protection ("FDEP"). PEF further completed and submitted the Combined
17 License Application ("COLA") for the LNP to the Nuclear Regulatory
18 Commission ("NRC") on July 30, 2008. The NRC completed its sufficiency
19 review on the Levy COLA and docketed the COLA on October 6, 2008. PEF
20 also completed and submitted to the NRC its Limited Work Authorization
21 ("LWA") request for the LNP concurrent with the Levy COLA. This LWA
22 request was subsequently updated on September 12, 2008 to include the
23 diaphragm wall and grouting site work based on interactions with the NRC.

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Q. You mentioned an LWA in your previous response. What is an LWA?

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

PEF's NRC submittal requested a schedule that included issuance of the Final Environmental Impact Statement ("FEIS") in June 2010, the LWA in September 2010, the Final Safety Evaluation Report ("FSER") in January 2012, and the COL in the first quarter of 2012.

Q. What is the current status of the Company's 2008 DEP and NRC regulatory filings?

A. The DEP issued its SCA report to PEF on January 12, 2009, and the SCA hearing concluded in March 2009. DEP is scheduled to issue its order on PEF's SCA in May 2009, and the Governor and Cabinet sitting as the Siting Board are expected to vote on the Levy SCA by the end of the summer of 2009. The Levy SCA is on schedule.

1 The NRC Staff recently indicated that the COL review is on
2 schedule but the proposed LWA scope review will require the same
3 duration as the COLA to complete, meaning the LWA and COL issuance
4 would be expected at the same time. Specifically, the NRC Staff
5 determined in late January that the NRC review and approval process of
6 the proposed LWA scope could not be completed sooner than the
7 corresponding geotechnical review and approval of the broader COLA,
8 particularly the Final Safety Analysis Report ("FSAR") portion of the
9 COLA. As a result of this NRC determination, the site work that PEF
10 planned to perform under the LWA prior to COL issuance will have to be
11 deferred until after COL issuance. Based on this NRC determination PEF
12 also expects a schedule shift in the commercial operation dates of the
13 LNP. This NRC determination will force PEF to shift substantial site
14 work until much later in the process, which will in turn result in a deferral
15 of various construction activities.

16
17 **Q. Did PEF's LWA application for the Levy site comply with NRC LWA**
18 **requirements?**

19 **A.** Yes, the Company complied with all requirements for the LWA. The
20 NRC confirmed that PEF's LWA met the NRC's requirements on October
21 6, 2008 when the NRC informed PEF that the NRC Staff had completed
22 its acceptance review and determined that PEF's COLA, which included

1 the LWA, was acceptable for docketing. Docketing of the COLA
2 commences NRC review of the substance of the COLA.

3
4 **Q. Did the NRC approve the Company's proposed schedule when it
5 docketed the COLA?**

6 A. No. Docketing of the COLA by the NRC does not mean the NRC has
7 approved the utility's proposed schedule for LWA and COL issuance.
8 Typically, the NRC issues its review schedule thirty (30) days following
9 the docketing of the COLA, but the NRC can take longer to issue the
10 review schedule; it is not required to issue a schedule within 30 days. The
11 NRC uses this additional time to evaluate information necessary to
12 determine the NRC's review critical path and associated schedule
13 milestones. The NRC obtains this information through Requests for
14 Additional Information ("RAIs"). RAIs are expected in the COLA
15 process and typically issued by the NRC with respect to every COLA.

16
17 **Q. Did the NRC issue any RAIs when PEF's COLA was docketed?**

18 A. Yes. The NRC issued several RAIs regarding the Levy site geotechnical
19 characteristics to develop a complete review schedule. The NRC
20 indicated that although the acceptance review determined that the LNP
21 COLA was complete and technically sufficient, the geotechnical
22 characteristics of the Levy County site required additional information in

1 order to develop a complete and integrated review schedule. There was no
2 indication that an LWA would not be issued for the scope requested.

3
4 **Q. Did PEF work with the NRC Staff with respect to the LNP COLA
5 schedule?**

6 A. Yes. PEF worked with NRC staff regarding the COLA review schedule
7 and, in particular, the proposed LWA issuance. Prior to submitting the
8 LWA, PEF met with NRC New Reactors Office (“NRO”) managers on
9 two occasions to ensure that the NRO managers understood the LNP
10 scheduling needs and that the desired timelines were identified prior to
11 license submittal. In addition, PEF met with NRC technical reviewers
12 twice before submitting the LWA to ensure that the NRC understood Levy
13 site-specific geotechnical features and the proposed foundation design for
14 the Nuclear Island (“NI”). PEF continued to work with the NRC Staff
15 after PEF submitted its COLA, including the LWA. PEF timely provided
16 the NRC Staff the requested answers to the geotechnical RAIs, and met
17 with and discussed with the NRC Staff the RAIs and the LWA.

18
19 **Q. Did the NRC Staff indicate during the RAI review that an LWA could
20 not be issued for Levy in advance of the COL?**

21 A. No. The discussions focused on the Levy site’s geotechnical
22 characteristics, but the NRC accepted the Company’s RAI responses and
23 did not indicate that an LWA could not be issued or that there was any

1 additional information they needed to make that determination.

2 Discussions on January 23, 2009 were the first indication that the NRC
3 Staff deemed the LWA geotechnical scope review duration to be
4 concurrent with the COL, such that both the LWA and COL issuance
5 would be concurrent.

6
7 **Q. Did the inclusion of the diaphragm wall and grouting activities in the**
8 **September 2008 LWA revision to the LWA scope necessitate a shift in**
9 **the proposed LWA issuance date?**

10 A. No. The mere inclusion of these site work activities in the scope of the
11 LWA did not mean that the LWA issuance date would shift. At that point
12 in time, PEF had requested review milestone dates (in the COLA
13 submittal) but the NRC had not yet developed a review milestone schedule
14 for the Levy COLA. PEF believed that the NRC had adequate time to
15 review the Company's LWA request and issue the LWA prior to the COL,
16 consistent with PEF's original project schedule, even if these site work
17 activities were included in the LWA. This was particularly true given that
18 PEF was able to complete its own evaluation of the site and identify
19 approaches for dewatering and excavation, including the diaphragm wall
20 and grouting, in about eighteen months.

21 Further, the site work associated with dewatering and excavation,
22 are activities normally done prior to receiving the COL. Consequently, we
23 reasonably believed that the work necessary to support dewatering and

1 excavation of the area where the Nuclear Island would be constructed
2 would not require such extensive NRC review as the NRC has now
3 determined to be necessary. Similar dewatering measures are in fact
4 typical of large construction projects in Florida and other areas with
5 similar geotechnical characteristics to Florida. While these issues are
6 complex, that complexity does not mean they cannot and have not been
7 completed on other projects and these same or similar dewatering
8 activities have been successfully employed.

9
10 **Q. What did the Company do in response to the NRC's determination?**

11 **A.** Since late January, the Company has engaged in ongoing discussions with
12 the NRC Staff regarding the LWA, potential modifications to the LWA, or
13 other alternatives that allow the Company to proceed with site work prior
14 to COL issuance. The Company first offered to reduce the scope of the
15 LWA to only include diaphragm wall and grout work, in an effort to
16 reduce the potential impact on the schedule. The Company believed that
17 this reduced LWA scope would establish the water barrier required to
18 conduct dewatering and excavation of the Nuclear Island, and would
19 require a simpler review, since the Levy COLA does not credit either the
20 diaphragm wall or the grout for any nuclear safety related function of the
21 Nuclear Island. The NRC indicated, however, that any permeation grout
22 work would also require an extended geotechnical review to confirm that
23 all safety questions were addressed and so that scope would not allow for

1 review and issuance of the LWA before the COLA. The NRC did agree
2 that inclusion of only the diaphragm wall in the LWA could be reviewed
3 and issued prior to the COL. The NRC issued the Milestone Review
4 Schedule in mid-February 2009 showing the COL issuance on schedule
5 but noting that the LWA scope and schedule was not yet resolved.

6
7 **Q. What options did the Company evaluate with respect to the LWA?**

8 **A.** PEF considered the following options: (i) revising the scope of the LWA
9 to include only the diaphragm wall; (ii) requesting an exemption from the
10 LWA requirement; and (iii) shifting the project schedule by not requesting
11 an LWA. As discussed below, the Company chose the third option.

12 Upon further evaluation of the first option, the Company
13 determined that limiting the scope of the LWA for only the diaphragm
14 wall would not benefit the overall project schedule. The most time-
15 consuming site work, like the permeation grout work, was contained in the
16 scope of the updated LWA request and without an LWA to authorize it,
17 that work will have to be done after the COL issuance. Both the
18 installation of the diaphragm wall and permeation grouting are necessary
19 to allow dewatering and excavation for the Nuclear Island. The Company
20 therefore determined that the schedule improvements from this more
21 limited LWA scope were not beneficial to the LNP.

22 PEF also considered seeking an exemption from the LWA
23 requirement, consistent with Parts 50 and 52 of the Code of Federal

1 Regulations (“CFR”). If approved, an exemption allows the Company to
2 do the site work without a formal LWA issued by the NRC. The
3 Company determined, however, that obtaining an exemption for the LWA
4 is uncertain and risks even further delay. Specifically, the NRC may
5 decline to issue an exemption. And, even if the NRC issued the
6 exemption, the Company believes there is a likelihood that the exemption
7 would be challenged. The process to resolve a challenge to an exemption
8 can take several years, and the Company is not allowed to proceed with
9 the work until the challenge is favorably resolved, thus negating any
10 benefit of an LWA exemption from a scheduling perspective. In addition,
11 seeking such an exemption may negatively impact the COLA approval
12 process, since some of the NRC personnel tasked with evaluating the
13 LWA exemption are needed to review the COLA. For all these reasons,
14 PEF decided that it is prudent not to pursue an LWA exemption.

15 Finally, PEF considered and ultimately opted not to seek the LWA.
16 A schedule shift is prudent for several reasons. First, a schedule shift
17 allows the Company to limit the near-term price impact on its customers
18 during the current economic conditions. This impacts our customers, and
19 by only incurring those costs that are necessary to maintain the COLA
20 timeline and certain other, limited costs to keep the project on task, we are
21 able to limit customer bills for the next couple of years.

22 In addition, the schedule shift allows time for the Company to gain
23 greater clarity on a number of issues that are important to the successful

1 completion of the LNP. Shifting the schedule should help mitigate the
2 impact of any further regulatory process delays by shifting capital
3 spending to a later date, after regulatory approvals are expected. The shift
4 also reduces the financial demands on the Company and its customers
5 during a period of uncertain federal energy policy regulation and the
6 current economic downturn.

7
8 **Q. What is the impact of the NRC Staff determination on the Company's**
9 **EPC contract?**

10 A. PEF is currently working with the Consortium to assess the impact of the
11 NRC Staff's position on the pre-construction LWA. Pursuant to the EPC
12 contract, PEF notified the Consortium and has begun negotiations with the
13 Consortium for an amendment to the EPC contract to incorporate a new
14 schedule. Although the overall schedule impact is not certain at this time,
15 PEF expects the schedule to shift at least 20 months. Any impact on the
16 total LNP cost is also uncertain at this time. The schedule impacts and the
17 cost impacts, if any, will be better known upon completion of negotiations
18 with the Consortium to amend the EPC contract between PEF and the
19 Consortium.

20
21 **Q. How is the Company addressing the expected LNP schedule shift?**

22 A. In reviewing the impact of the schedule shift on the LNP, PEF will be
23 weighing a number of factors in assessing how best to proceed with the

1 project. The impact, if any, on overall project cost will be an important
2 factor, but PEF will also take into consideration how the shift may allow it
3 to minimize the nearer-term costs of the LNP to the Company's customers,
4 mitigate any further regulatory process delays by shifting capital spending,
5 and reduce the financial demands on the Company and its customers
6 during a period of uncertain federal energy policy regulation and the
7 current economic downturn.

8 The Company believes that continuing, although at a slower pace
9 than initially anticipated, is a reasonable and prudent course at this early
10 stage of the project. PEF continues to need base load advanced nuclear
11 generating capacity on its system, and PEF and Florida need a more
12 diverse energy portfolio to decrease their dependence on fossil fuels such
13 as coal, natural gas, and oil, which can be extremely volatile in price and
14 supply. New, advanced-design nuclear power remains the best available
15 technology to provide reliable electric service and to make significant
16 reductions in greenhouse gas emissions, and Florida remains the national
17 leader in progressive public policy to support the development of new,
18 advanced nuclear power. The LNP continues to be the best base load
19 generation option, taking into account cost, potential carbon regulation,
20 fossil fuel volatility, and the benefits of fuel diversification. PEF,
21 accordingly, remains committed to the project and the LNP remains
22 feasible.

23

1 **Q. What are the Company's current plans for the LNP?**

2 A. PEF will focus on obtaining key state and federal permits, such as the
3 SCA and COL. The Company is already working with the Consortium to
4 amend the EPC contract to reflect the schedule shift and, to the extent
5 possible, PEF's nearer-term focus on obtaining the Levy COL.

6 PEF has also filed with the Commission its actual/estimated 2009
7 and 2010 costs for the LNP reflecting this reordered focus on obtaining
8 key LNP permits as a result of the schedule shift. PEF has provided
9 reasonable projections for costs to be incurred during the remainder of
10 2009 and all of 2010. These costs are explained in more detail below and
11 in Mr. Foster's testimony and exhibits. These projected costs were
12 developed using the best available information to the Company at this
13 time. Because of the schedule shift associated with the LNP, and its affect
14 on the expenditures PEF must make during the near-term period, however,
15 some of PEF's projected costs may change after the date of this filing.
16 The Company's projections still are based upon its best-available
17 information, therefore, the Commission should approve PEF's projections
18 as reasonable pursuant to the Nuclear Cost Recovery Rule.

19 Alternatively and consistent with the Company's nearer-term focus
20 on the impact of the LNP costs on the Company's customers, PEF
21 proposes a nearly 50 percent reduction in cost recovery in 2010 over what
22 the Company is otherwise entitled to collect under the Florida nuclear cost
23 recovery legislation and applicable PSC rule. This alternative proposal to

1 the Company's request for recovery of its prudent LNP costs prior to 2009
2 and reasonable 2009 and 2010 projected costs under the statute and rule is
3 explained in detail in the testimony of Mr. Foster.

4
5 **.Q. Can you generally explain what the LNP costs are for 2009 and 2010?**

6 A. Yes. From January to March 2009, PEF incurred reasonable and prudent
7 EPC costs for the contract agreement with the Consortium. Costs incurred
8 to date are for payments of contract milestones that are well defined in a
9 number of areas, including equipment, manufacturing, procurement, and
10 scheduling that have clear scope descriptions and division of
11 responsibility.

12 From January to March 2009, PEF also incurred reasonable and
13 prudent license application costs for the COL involving responses to the
14 NRC's on-going RAIs and NRC Audits. PEF further incurred costs in
15 connection with its SCA. PEF has been supporting the SCA review
16 process during 2009. Along with the SCA, PEF is incurring costs in 2009
17 for other environmental and permitting activities such as wetlands
18 mitigation, the early Environmental Review Permit ("ERP") for
19 construction of a barge slip (issued March 15, 2009), and the U.S. Army
20 Corps of Engineers review and approval of Section 404 (Clean Water Act)
21 permits that will be required to support the Levy site development. PEF
22 will continue to focus its efforts, and corresponding costs, on these permits
23 and the COL in 2009 and 2010.

1
2 **III. GENERATION PRE-CONSTRUCTION ACTIVITIES**

3 **Q. What costs has PEF included in this filing for nuclear generation pre-**
4 **construction costs?**

5 **A.** PEF has 2009 actual/estimated and 2010 projected Pre-Construction costs
6 for generation for the Levy Nuclear Plant. PEF's total estimated 2009
7 costs associated with the LNP, excluding transmission costs, are
8 approximately \$275.9 million. PEF projects its 2010 costs for the LNP,
9 excluding transmission costs, to be approximately \$100.4 million.
10 Schedule AE-6 of Exhibit No. __ (TGF-1) shows generation pre-
11 construction costs for 2009 actual/estimates in the following categories:
12 License Application development costs of \$38.8 million; Engineering,
13 Design & Procurement costs of \$237.2 million; Clearing, Grading, and
14 Excavation costs of \$0.2 million, and On-Site Construction Facilities costs
15 of \$(0.3) million. Schedule P-6 of Exhibit No. __ (TGF-2) breaks down
16 the 2010 projected generation pre-construction costs into the following
17 categories: License Application costs of \$24.1 million; Engineering,
18 Design & Procurement costs of \$76.1 million; and On-Site Construction
19 Facilities costs of \$0.1 million.

20
21 **Q. Please describe what the License Application costs are, and why the**
22 **Company has to incur them.**

1 A. These License Application costs are necessary to support the Levy COLA,
2 SCA, and necessary environmental and other permits. The LNP COLA was
3 submitted July 30, 2008 and docketed by the NRC on October 6, 2008. After
4 docketing, PEF entered Phase 2 of the COLA work. This work involves
5 providing responses to NRC RAIs and NRC Audits. PEF expects the NRC
6 license approval process to take approximately 42 months, following the RAIs,
7 Audits, and any necessary hearings. PEF will continue to incur costs in 2009
8 and 2010 to support the LNP COL.

9 PEF also incurred costs in connection with its SCA, which was completed
10 and submitted to DEP on June 2, 2008. PEF has been supporting the SCA
11 review process during 2009. The DEP issued its SCA report to PEF on January
12 12, 2009, and the SCA hearing concluded in March 2009. DEP is scheduled to
13 issue its order on PEF's SCA in May 2009, and the Governor and Cabinet
14 sitting as the Siting Board are expected to vote on the Levy SCA by the end of
15 the summer of 2009. PEF expects to continue to incur costs in 2009 to support
16 the SCA.

17 Along with the SCA, PEF is incurring costs in 2009 for other
18 environmental and permitting activities such as wetlands mitigation, the early
19 ERP for construction of a barge slip (issued March 15, 2009), and the U.S.
20 Army Corps of Engineers review and approval of Section 404 (Clean Water
21 Act) permits that will be required to support the Levy site development.

22 These License Application costs are necessary to ensure the timely
23 approval of the Company's COLA and SCA filings. Obtaining these key

1 regulatory approvals on a timely basis is currently the focus of PEF's efforts on
2 the LNP.

3 PEF developed these preconstruction License Application cost estimates
4 on a reasonable licensing and engineering basis, using the best available
5 information to the Company, and consistent with utility industry and PEF
6 practices. For the costs associated with the COLA review, PEF used the terms
7 of its COLA contract as well as updated forecasts which are provided on a
8 monthly basis by the contractor to estimate the costs it will incur for the
9 technical support necessary for the NRC review. In addition, PEF based its
10 projections on known project milestones necessary to obtain the requisite NRC
11 and DEP licenses. Because PEF is using actual or expected contract costs,
12 NRC estimates, its own experience, and relevant utility industry insight, PEF's
13 cost estimates for the preconstruction License Application work are reasonable.

14
15 **Q. Please describe what the Engineering, Design & Procurement costs are,
16 and explain why the Company has to incur them.**

17 **A.** These costs include contracted services to engineer, procure, and construct two
18 Advanced Passive Light Water reactors at the Levy Site. The EPC contract
19 scope also includes design finalization of the standard AP1000 Power Block,
20 site-specific detailed design, and construction of the Levy Nuclear Steam
21 Supply System ("NSSS"), and balance of plant structures (turbine generator,
22 etc.), including site buildings/structures/systems (such as cooling tower make-
23 up intake structure, mechanical cooling towers, etc.).

1 PEF must incur these Engineering, Design & Procurements costs to
2 support the timely approval of the COLA and SCA applications. Given the
3 expected shift in the schedule due to the NRC Staff determination on the
4 requested LWA scope, PEF has made the reasonable and prudent decision to
5 limit its expenditures until the COL is issued.

6 PEF developed these preconstruction Engineering, Design & Procurement
7 cost estimates on a reasonable engineering basis, using the best available
8 information, consistent with utility industry and PEF practices. To develop the
9 costs, PEF utilized cost information from the EPC contract. These projected
10 costs may, however, change depending on the outcome of the contract
11 amendment negotiations with the Consortium. For example, PEF currently
12 expects that it can limit its 2009 and 2010 costs to completion of the
13 engineering work that was already started until PEF and the Consortium have
14 reached agreement on the scope of work necessitated by the shift in schedule.
15 Further work or costs under the EPC, including long-lead equipment payments
16 to maintain its place in the queue for such equipment, however, depend on
17 PEF's negotiations with the Consortium to amend the EPC contract agreement.
18 Because PEF is using actual or expected contract costs, its own experience, and
19 utility industry practice, PEF's cost estimates for the preconstruction
20 Engineering, Design & Procurement work are reasonable.
21

IV. GENERATION CONSTRUCTION ACTIVITIES

1
2 **Q. What costs has PEF included in this filing for generation construction**
3 **costs?**

4 **A.** PEF has 2010 projected Construction costs for nuclear generation for the Levy
5 Nuclear Plant. Schedule P-6 of Exhibit No. __ (TGF-2) breaks down the 2010
6 projected generation construction costs into the following categories: Real
7 Estate Acquisition costs of \$10 million and Permanent Staff/Training costs of
8 \$0.3 million.

9
10 **Q. Please describe what the Real Estate Acquisitions costs are, and explain**
11 **why the Company has to incur them.**

12 **A.** These costs include costs associated with acquisition of real estate for wetlands
13 mitigation and for the blowdown path right-of-way corridor to the Crystal
14 River Energy Complex ("CREC") discharge canal. It is critical to obtain this
15 land now because if PEF were to wait to acquire access to this land until a later
16 time, the land may not be available for purchase, since a governmental agency
17 is involved. PEF believed that it is reasonable and prudent to acquire rights to
18 this property at this time. Accordingly, PEF has decided to move forward with
19 this purchase and lock in the price for the land, which is necessary for the LNP.

20 PEF developed these construction Real Estate Acquisition cost estimates
21 on a reasonable engineering basis, using the best available information,
22 consistent with utility industry and PEF practice. For the make-up structure
23 easement, these cost estimates are based on the actual offer negotiated between

1 the State and PEF for purchase of the land at issue. Because PEF is using an
2 actual offer upon which to base its costs, PEF's cost estimates for the
3 construction Real Estate Acquisition work are reasonable.

4
5 **Q. Please describe what the Permanent Staff/Training costs are, and explain**
6 **why the Company has to incur them.**

7 **A.** These costs include initial staffing of experienced personnel necessary to
8 develop the Levy Training program. AP1000 passive plant training program
9 and simulator development is now underway in the U.S. industry, and this work
10 is shared among specific AP1000 announced utilities. This training
11 development work is a necessary step in advance of delivering training to
12 permanent plant personnel who will operate and maintain the new Levy
13 Nuclear Plant.

14 These Permanent Staff/Training costs are necessary to ensure that the
15 required staff will be trained and ready when the fuel is loaded into the reactor.
16 PEF needs highly skilled staff to operate the Levy units, and this training takes
17 months to complete. Without an adequate number of trained and licensed staff,
18 the Company will not be able to load the nuclear fuel and the project will
19 necessarily be delayed.

20 PEF developed these Permanent Staff/Training construction cost estimates
21 on a reasonable engineering basis, using the best available information,
22 consistent with utility industry and PEF practice. PEF was able to use the
23 knowledge gained from operating and training operators for its Crystal River 3

1 ("CR3") nuclear unit to develop these cost estimates. Because PEF is using its
2 own experience and utility industry practice, PEF's cost estimates for the
3 construction Permanent Staff/Training work are reasonable.

4
5 **V. TRUE UP TO ORIGINAL COST FILING FOR 2009**

6
7 **Q. Has the Company filed schedules to provide information truing up the**
8 **original estimates to the actual costs incurred?**

9 **A.** Not at this time. As discussed in Mr. Foster's testimony and addressed
10 above, while PEF does have a reasonable basis for projecting near term
11 project costs, until PEF is able to negotiate an EPC contract amendment
12 with the Consortium, PEF will not be able to provide meaningful updates
13 to the total project costs beyond the total project cost estimate that PEF
14 has already provided.

15
16 **Q. What is the total project estimate?**

17 **A.** The total project budgeted cost estimate, inclusive of AFUDC and fully
18 loaded, remains about \$17.2 billion, as provided in the Company's
19 September 2008 LNP Integrated Project Plan ("IPP"). The total project
20 cost estimate, however, may change depending upon the ultimate outcome
21 of negotiations with the Consortium to amend the EPC contract. At that
22 point, PEF will prepare, review, and obtain internal management approval
23 of a revised budgeted cost estimate for the LNP. Until that occurs, the

1 Company-approved budgeted total costs for the LNP remains
2 approximately \$17.2 billion. Simply put, there is no better total project
3 cost estimate that can be provided at this time.
4

5 **VI. RULE 25-6.0423(5)(c)5: LONG-TERM FEASIBILITY OF**
6 **COMPLETING THE LNP**

7 **Q. Is the Levy Nuclear Project still feasible?**

8 **A.** Yes.

9
10 **Q. Why is the LNP feasible?**

11 **A.** The LNP continues to be feasible for a number of reasons. First, the AP
12 1000 reactor design remains a viable nuclear technology. Other utilities,
13 including Southern Company and SCANA, continue to move forward with
14 licensing of nuclear units using the AP 1000 design, and the Haiyang and
15 Sanmen Projects in China have been progressing on schedule with the AP
16 1000 design. PEF expects that the AP 1000 technology will continue to
17 represent a viable and feasible choice for its LNP.

18 The LNP is also feasible from a project milestone perspective. To
19 date, PEF has achieved every major LNP project milestone, with the
20 exception of the LWA. Specifically, PEF chose a site, selected a reactor
21 technology, obtained a need determination, applied for the SCA, applied
22 for the COL, and executed an EPC agreement. The COL and the SCA are
23 expected to be issued within the timeframe originally estimated by the

1 Company. There will be a schedule shift, but there is no reason now to
2 believe that the SCA, COL, or any other permit needed for the LNP will
3 not be issued and, therefore, the Company is confident the LNP can be
4 completed.

5 Additionally, the essential reasons the Company selected the LNP
6 to meet customer needs for future generation capacity have not
7 fundamentally changed. PEF continues to need base load capacity in the
8 future and new, advanced-design nuclear power remains the best available
9 technology to provide reliable, base load electric service and to make
10 significant reductions in greenhouse gas emissions. PEF and Florida
11 continue to need a more diverse energy portfolio to reduce their reliance
12 on fossil fuels such as coal, natural gas, and oil that can be volatile in
13 price, subject to supply disruptions, and susceptible to foreign government
14 and market influences. The LNP, accordingly, continues to be the best
15 base load generation option, taking into account all the reasons PEF
16 committed to the project in the first place.

17
18 **Q. Does the project remain feasible despite the schedule shift?**

19 **A.** Yes, it does. The Company has analyzed the schedule shift, and it remains
20 committed to the LNP to bring new nuclear generation to the State of
21 Florida and its customers. Shifting the project for this time period is a
22 reasonable and prudent course of action, given the unexpected events that
23 have transpired.

1

2

Q. Has the Company updated its fuel forecasts and environmental forecasts presented in the need proceeding?

3

4

A. Yes, consistent with the requirements set forth in Order Number PSC-08-0518-FOF-EI, the need order, the Company prepared updated fuel forecasts and environmental forecasts. The updated fuel forecast is reflected in my Exhibit No. __ (GM-1), and the updated environmental forecast is reflected in my Exhibit No. __ (GM-2).

5

6

7

8

9

10

Q. What is the updated non-binding capital cost estimate for the LNP?

11

A. Pursuant to the Company's LNP IPP, the updated non-binding capital cost estimate for the LNP is approximately \$17.2 billion. As I explained above, this remains the Company's approved, budgeted total cost for the LNP at this time, but the total project cost estimate may change depending upon the ultimate outcome of negotiations with the Consortium to amend the EPC contract. Until those negotiations are concluded, and the Company revises and management approves its budgeted total costs for the LNP based on the results of those negotiations, the total capital cost estimate remains about \$17.2 billion.

12

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21

Q. Consistent with the requirements set forth in the need order, please provide information regarding discussions pertaining to potential joint ownership in the LNP.

22

23

REDACTED

1 **A.** PEF is continuing its negotiations with municipal, electric cooperative,
2 and investor-owned utilities regarding potential joint ownership in the
3 LNP. Although we cannot predict the ultimate outcome of these
4 discussions, we remain confident that we will complete negotiations and
5 execute joint ownership agreements with at least some potential co-
6 owners. [REDACTED]

7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]

11

12 **VII. PROJECT MANAGEMENT AND COST CONTROL OVERSIGHT**

13 **Q.** **Has the Company implemented any additional project management**
14 **and cost control oversight mechanisms for the Levy project, since the**
15 **testimony you filed on March 2, 2009?**

16 **A.** Yes, the Company implemented several new policies to implement the
17 EPC contract upon its execution. For example, an EPC Invoice Validation
18 and Processing implementation procedure has been developed and
19 implemented. The new procedure is utilized for each EPC invoice that is
20 submitted. Prior to payment of invoices under the EPC contract, the costs
21 go through a thorough review process for completeness, accuracy, and
22 supporting documentation. All payments are approved utilizing the
23 Company's Corporate Approval Policy. PEF is continuing to work on

1 developing, refining, and implementing these EPC implementing
2 procedures, which provide specific project management tools to
3 appropriately manage the execution of the EPC contract. Even though
4 negotiations for an EPC contract amendment are underway, the EPC
5 contract remains in force, and therefore the NPD project management
6 controls, such as the EPC implementing procedures, are necessary and
7 important to effective contract execution.

8 In addition to the EPC implementing procedures discussed above,
9 NPD Management is in the process of reviewing the Project Execution
10 Plan Submittal List completed and submitted by the Consortium on March
11 31, 2009. The execution plan includes specific plans in the areas of Risk
12 Management, Lessons Learned, Quality, Project Controls, and other
13 project management plans delineated in the overall Project Execution Plan
14 submitted. NPD Management has also worked with the Consortium and
15 taken specific actions to improve the EPC Monthly Project Status Report
16 with respect to both contractual requirements and project management
17 areas required by NPD to effectively manage the project. Risk
18 Management, Key Performance Indicators (“KPIs”), Audits, and
19 Procurement are some of the focus areas that NPD is requiring more
20 specific details in the Consortium’s report.

21 NPD has also significantly expanded the format of the NPD
22 Performance Report upon execution of the EPC Agreement. The
23 expanded format includes a more metrics based focus. KPIs continue to

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contract execution. Section contributors to the plan are in the process of developing inputs for their assigned subject areas and submitting the sections to Project Controls for review. NPD continues to recruit and secure appropriate staffing to build out all aspects of the project infrastructure to ensure appropriate overall project controls.

Q. Does this conclude your testimony?

A. Yes, it does.

1 be identified. The report also contains a section dedicated to project risk
2 and status updates from the vendor prepared monthly reports. A KPI Lead
3 Team was established to develop and monitor project KPI's.

4 NPD continues to develop the process that implements a more
5 robust NPD Risk Management process that aligns the LNP with the
6 standards set by the Company's Project Management Center of
7 Excellence. NPD has completed the Owner Acceptance Review of the
8 Risk Software Platform Evaluation Report and the NPD Risk Register and
9 Action Plan documents submitted by the Owner Engineer. A platform has
10 been selected and the process has commenced to procure the new software
11 and implement the plan to migrate the data to the new software. The NPD
12 Risk Management procedure will also be revised to align with the new
13 Project Management Center of Excellence standards and incorporate the
14 process steps NPD is implementing for Risk Management. In addition to
15 Risk Management, NPD will continue to implement additional procedures
16 that the Project Management Center of Excellence will be establishing for
17 project management processes. Cost Management and Time Management
18 are two examples.

19 Project Controls is in process of completing and issuing a Schedule
20 Controls procedure. This procedure provides instructions for developing
21 and maintaining the Levy Integrated Master Schedule and Integrated
22 Master Work Breakdown Structure. Also, work has started on developing
23 significant revisions to the Levy Project Execution Plan since EPC

1 **BY MR. BURNETT:**

2 Q. Mr. Miller, do you have a summary of your
3 prefiled testimony?

4 A. I do.

5 Q. Will you please give it?

6 A. Yes. My name is Garry Miller. My direct
7 testimony supports the prudence of the company's costs
8 incurred in furtherance of the Levy Nuclear Project in
9 2006, 2007 and 2008. These costs were necessary to
10 advance the Levy Nuclear Project and they are prudent.
11 Indeed, I understand that no Intervenor has challenged
12 the prudence of any specific actual cost incurred by the
13 company from 2006 through 2008 for the Levy Nuclear
14 Project.

15 I also explain in my direct testimony that the
16 company's estimated 2009 and 2010 costs for the Levy
17 Nuclear Project are reasonable. These estimated costs
18 reflect a lower level of spending that accounts for the
19 unexpected schedule shift for the Levy Nuclear Project
20 due to the NRC's determination that it cannot timely
21 review and therefore issue the limited work
22 authorization, LWA, requested by the company.

23 These estimated costs primarily involve
24 scheduled long-lead item payments and the necessary cost
25 to obtain a combined operating license from the NRC for

1 the nuclear project and other federal and state
2 regulatory approvals. These costs would have been
3 incurred in 2009 and 2010 regardless of the NRC's
4 decision with respect to the LWA. As I understand too,
5 no Intervenor has challenged the reasonableness of any
6 specific estimated cost for 2009 and 2010 for the Levy
7 Nuclear Project.

8 Finally, my testimony supports the long-term
9 feasibility of the LNP. The LNP continues to be
10 feasible for a number of reasons including, number one,
11 the Westinghouse AP 1000 reactor design remains a viable
12 nuclear technology for the deployment at the Levy site,
13 with, among other factors, AP 1000 construction is
14 proceeding at two sites in China.

15 Number two, the Levy, the LNP remains feasible
16 from a project milestone perspective as evidenced by the
17 fact that PEF has achieved every major milestone as
18 planned with the exception of the LWA, which is now part
19 of the COL issuance.

20 And, third, the essential reasons for the LNP
21 have not fundamentally changed. Therefore, the
22 long-term completion of the Levy nuclear power plants is
23 feasible. Thank you.

24 **MR. BURNETT:** Madam Chair, before tendering
25 Mr. Miller I would just like to note for Mr. Miller and

1 the parties that he has quite a bit of confidential
2 information in his testimony. So I'd just ask for Mr.
3 Miller to be cognizant of that in giving his responses,
4 but we tender him for cross.

5 **COMMISSIONER EDGAR:** Okay. Thank you for the
6 point. We ask everyone, of course, to be sensitive to
7 that and we'll work our way through it together, if need
8 be.

9 Mr. Rehwinkel, do you have cross.

10 **MR. REHWINKEL:** Yes I do, Madam Chairman. And
11 along the lines of Mr. Burnett's comments, I have fairly
12 lengthy cross-examination for this witness, and a good
13 bit of it deals with confidential information. So I am
14 going to endeavor to be very cautious about that. I
15 would beg the Commission's indulgence with respect to
16 the pace of cross-examination because I want to be very
17 cautious and make sure that any answer I elicit is given
18 consideration by the witness as to the nature of the
19 information, and the need to point to information and
20 ask people to read it versus stating it out loud. So
21 I'd just ask for your indulgence on that.

22 **COMMISSIONER EDGAR:** I understand. And,
23 again, we appreciate your sensitivity.

24 **MR. REHWINKEL:** Thank you.

25 **CROSS EXAMINATION**

1 **BY MR. REHWINKEL:**

2 Q. Good afternoon, Mr. Miller.

3 A. Good afternoon.

4 Q. My name is Charles Rehwinkel. We've met
5 before. It's good to see you again.

6 A. You too.

7 Q. You are the person or the individual in the
8 most direct, most directly, in management most directly
9 responsible for the building of the LNP project; is that
10 correct?

11 A. That is correct.

12 Q. In your testimony that you've given in this
13 matter so far, including your deposition, you have
14 described a series of events culminating in a schedule
15 shift of between 20 to 36 months; is that correct?

16 A. That is correct.

17 Q. And by schedule shift, I mean in the schedule
18 of the licensing, construction and completion of the LNP
19 project.

20 A. That is correct. It is a schedule shift in
21 the in-service date of the LNP project.

22 Q. Okay. And is that still a good estimate?

23 A. The 20 to 36 month is still a good estimate.
24 Yes.

25 Q. Okay. And do you still have -- do you have

1 any idea when you might decide whether it's 20 or 36 or
2 some other number?

3 **A.** Yes. The, the, the decision-making is ongoing
4 in our company with regard to the final decision of what
5 that schedule shift would be, incorporating information
6 that we're getting from Westinghouse and Shaw and
7 considering other relevant information. And so we would
8 anticipate we would make that decision here maybe in the
9 next two months.

10 **Q.** Okay. But here today you cannot say what that
11 schedule shift number actually will be; is that right?

12 **A.** It is correct to say that our company has not
13 made a decision as of today on the schedule shift.

14 **Q.** Okay. Do you have with you, just so I can
15 take care of this before I move on, do you have with you
16 the testimony of Thomas Foster or Geoff Foster?

17 **A.** I do not, but I have the exhibits that I
18 sponsored.

19 **Q.** Okay. Do you have the exhibit I asked
20 Mr. Foster about, which is P8 TGF-2, Page 3 of 3?

21 **A.** I have TGF-2. Let me go to the specific page
22 you're talking about. Schedule P8?

23 **Q.** Yes.

24 **A.** At the bottom it says Page 20 of 46? At the
25 bottom of the document.

1 **Q.** I don't have that.

2 **A.** I believe it's, I believe I know which page
3 you're talking about, so let's proceed.

4 **Q.** Okay. What I'm asking you about is Line 15,
5 Column H. And it is a confidential number; is that
6 correct?

7 **A.** That is correct.

8 **Q.** Okay. Can you tell me, without telling me
9 what the number is, can you state publicly what this
10 number represents, represented at the time it was put on
11 the schedule?

12 **A.** It represented the overnight contract price
13 for the EPC.

14 **Q.** Okay. And that's the EPC to construct Levy
15 Nuclear Units 1 and 2?

16 **A.** That is correct.

17 **Q.** Can you tell me whether the number on Line 15,
18 Column H has changed?

19 **A.** Yes, it has changed.

20 **Q.** Do you know what it has changed to?

21 **A.** I cannot give you the specific number, but I
22 do know why it changed and sort of the magnitude of the
23 change.

24 **Q.** Okay. Can you state publicly what the
25 magnitude of the change is?

1 **A.** No, because it's a change order, which is a
2 confidential document.

3 **Q.** Okay. Is it possible that you could provide
4 that, that number that represents change to the parties
5 who have executed nondisclosure agreements in this
6 docket?

7 **A.** I would have to consult with the legal team of
8 how to do that.

9 **Q.** Okay. Is it possible that that number could
10 be provided before you get on the stand for rebuttal?

11 **A.** Yes, assuming that we work through the legal
12 mechanism to do that.

13 **MR. REHWINKEL:** Okay. Madam Chairman, what I
14 would like to do, similar to the request I had of
15 Mr. Franke, is ask for the incremental change in the
16 figure, Line 15, Column H, to be provided informally to
17 parties who have a, have executed the appropriate legal
18 documents to view it, if any.

19 **COMMISSIONER EDGAR:** Mr. Burnett.

20 **MR. BURNETT:** No objection.

21 **COMMISSIONER EDGAR:** Okay.

22 **MR. REHWINKEL:** And that we be shown this
23 information between culmination of his direct testimony
24 and his reappearance for rebuttal.

25 **COMMISSIONER EDGAR:** Okay. If it's possible

1 to do that on the lunch break to get it started, please
2 do so. If not, just as soon as reasonably able.

3 **MR. REHWINKEL:** Okay.

4 **MR. BURNETT:** Yes, ma'am.

5 **MR. REHWINKEL:** Thank you. And I will not ask
6 as a late-filed exhibit. We'll deal with that, if
7 necessary, at that time.

8 **COMMISSIONER EDGAR:** Okay.

9 **BY MR. REHWINKEL:**

10 **Q.** Okay. Do you know if, Mr. Miller, if any
11 other numbers on this TGF-2 schedule have changed
12 because of the schedule shift?

13 **A.** I have not reviewed these lines on this
14 particular, on P8 in that regard. As you can imagine,
15 there are contracts on here related to the overall
16 project execution. And so while you picked the one that
17 was related to the EPC, there are others such as related
18 to transmission, and all of that schedule is being
19 shipped accordingly. So there are some other contracts
20 on here that could possibly change.

21 **Q.** Okay. Do you know with any degree of
22 certainty -- or let me ask it this way. Do you know
23 with the same degree of certainty that you know about
24 the number we just discussed, the incremental change to
25 the EPC number, those other numbers?

1 **A.** No, because the activities to reflow that work
2 is still in progress. So, no.

3 **Q.** Okay. I'm done with this schedule then for
4 now. Thank you.

5 Now in your testimony, isn't it correct that
6 the cause, according to you, for -- well, let me, let me
7 strike that question.

8 And, Commissioner, I would like to ask for an
9 exhibit, two exhibits to be passed out at this time for
10 cross-examination. And these are not confidential.

11 **COMMISSIONER EDGAR:** Okay.

12 **MR. REHWINKEL:** And while Ms. Vandiver passes
13 those out, while Ms. Vandiver passes those exhibits out
14 --

15 **COMMISSIONER EDGAR:** So I am on 141, I
16 believe.

17 **MR. REHWINKEL:** Okay. Item 141 would be a
18 one-page exhibit called Levy Unit 1 Timeline.

19 **COMMISSIONER EDGAR:** Yes, please.

20 **MR. REHWINKEL:** And the second exhibit is
21 Excerpts from PEF COLA, C-O-L-A. That's a four- page
22 exhibit.

23 **COMMISSIONER EDGAR:** Okay. Exhibit marked
24 141, Levy Unit 1 Timeline. 142, Excerpts from PEF COLA.

25 **MR. REHWINKEL:** Actually it's a seven-page

1 exhibit. I misstated it.

2 **COMMISSIONER EDGAR:** This says Page 4 -- Pages
3 4 at the top.

4 **MR. REHWINKEL:** Yes. So what says four needs
5 to be changed to seven.

6 **COMMISSIONER EDGAR:** So noted. Thank you.

7 **MR. REHWINKEL:** Thank you.

8 (Exhibits 141 and 142 marked for
9 identification.)

10 **BY MR. REHWINKEL:**

11 **Q.** Mr. Miller, do you have the exhibits that have
12 been marked 141 and 142 --

13 **A.** I do.

14 **Q.** -- in front of you?

15 Exhibit 141 is the Levy estimated timeline of
16 the first unit. Do you see that?

17 **A.** I do.

18 **Q.** Are you familiar with this document or this, a
19 document similar to this?

20 **A.** Yes.

21 **Q.** Okay. And I'll represent to you this came
22 from a September 2008 slide presentation that included
23 confidential information, so I've excerpted just this
24 document.

25 **A.** Okay.

1 **Q.** Is it fair to say that this document here
2 represented, represents what your intent was with
3 respect to the timeline from filing of -- well, from the
4 preparation of your combined license application through
5 to commercial operation date for the Levy Unit 1?

6 **A.** I would characterize this as a graphic
7 illustration of how the schedule flows sort of in a
8 graphical form.

9 **Q.** Okay.

10 **A.** That's what this document is.

11 **Q.** So at a very high level, this is, this is the
12 major time milestone points for your project for Number
13 1.

14 **A.** At the time this document was produced, that
15 is correct.

16 **Q.** Okay. And the green box here with the arrow
17 pointing from the words LWA, that is the time frame that
18 the company intended to do the, essentially the
19 dewatering and excavation work that was the essence of
20 the LWA request; is that correct?

21 **A.** Well, based on the timeline of this, depending
22 on when it was exactly in September, this LWA scope
23 could have been from excavation forward, meaning
24 engineered (phonetic) backfill, mud mat, those kind of
25 things, forms, drilled shafts into some of the other

1 buildings. So depending on when it was this actual
2 document was produced, as with respect to the
3 September 12th letter where we modified the LWA scope,
4 subject to that clarification, it's describing where we
5 need LWA to come in to complete certain preconstruction
6 work prior to the work governed by the COL.

7 **Q.** Okay. And it is correct, is it not, that
8 performing the excavation and dewatering work as well as
9 the other work that was described in your LWA request to
10 the, to the NRC that was filed on September 12th, that
11 was crucial to meeting the September, I mean the 2016
12 COD; is that correct?

13 **A.** Yes. It is correct that the LWA as requested,
14 to complete that work in advance of early 2012, that was
15 necessary to achieve the mid 2016 date.

16 **Q.** Okay. Could you turn to Exhibit 142, which
17 are, as I represent to you, excerpts from the various
18 sections of your COLA that was on the Nuclear, the NRC's
19 website. Are you generally familiar with, with these
20 documents?

21 **A.** I am.

22 **Q.** Okay. And just the page, the first page there
23 is just a graphic representation of the way the two
24 units would look on the, superimposed on a photograph of
25 the site; is that right?

1 **A.** That is correct.

2 **Q.** Okay. And then the next page just shows the
3 location of the, the, the site with a star representing
4 the location of the units; is that correct?

5 **A.** Correct. That broken line which represents
6 the property boundary, which is defined as the site, and
7 the star is the general location of the power blocks
8 within that site.

9 **Q.** Okay. And the location of the star within the
10 dotted line is, is not an accident. That was something
11 that was, although it's probably an approximation of the
12 unit site, there is a reason for it being in that
13 location; is that right?

14 **A.** There is a reason. Nuclear plants require an
15 exclusionary area boundary, if you will, a buffer around
16 the plant where you control all the property for
17 emergency purposes. And so it, it's ideal to be able to
18 place the facilities in the center of the property and
19 take advantage of the property boundaries to the maximum
20 extent.

21 **Q.** Okay. And on the next page, this is the same
22 outline that's shown on the, with the dotted line, but
23 this shows where wetlands exist on the property site and
24 in the, in the surrounding land; is that correct?

25 **A.** That is correct. It shows an outline of the

1 power blocks and then it shows a wetland delineation.

2 Q. Okay. And those, those locations also played
3 a role in where you designated the exact location of the
4 units; is that correct?

5 A. Well, it's correct in a sense. When I go back
6 and remind you that the goal would be to place the units
7 in the center of the property to maximize the boundaries
8 to all the site boundaries, it turned out the way that
9 property was laid out that there were upland areas in
10 the center of the site that did not require a permit to
11 get into the wetlands. And so it was, it just happened
12 that we were able to start the work in the very center
13 of the site.

14 Q. Okay. And then on the next page there's a
15 representation of where a 100-year flood zone is
16 relative to the site; is that correct?

17 A. It is a representation of the 100-year flood
18 zone with respect to the current grade of the site.

19 Q. Okay. Did that play any role in the location
20 of the units within the property boundaries?

21 A. No. But the reason is is because the current
22 grade of the site is approximately 42 feet above sea
23 level. And as part of the preparation of the site, we
24 will remove some of the soil overburden that has roots
25 and vegetative matter and then raise that level to

1 approximately 50 feet at the power blocks.

2 Q. Okay. Thank you. The next page is sort of a
3 chart representation of the strata, the various strata
4 of soils and rocks in the area, the hydrology and kind
5 of the classification of, of the strata and geological
6 terms; is that correct?

7 A. Yes. This is a representation graphically of
8 the layers of the geosubstrate.

9 Q. And I, I am just taking you through this to
10 get some context for some of the questions that I'm
11 going to ask you.

12 The next page shows kind of the geology of the
13 area, the surface rock and the sediment types within ten
14 feet of the, of the land surface relative to the
15 location of the plant; is that right?

16 A. One moment. Let me review this document.

17 Q. Sure.

18 A. So this is a representation of what's in the
19 top ten feet of the soil overburden, if you will.

20 Q. Okay. And so where the star is shows that --

21 **COMMISSIONER EDGAR:** Mr. Rehwinkel, could you
22 pause for a moment?

23 **MR. REHWINKEL:** Yes.

24 **COMMISSIONER EDGAR:** I think Commissioner Skop
25 would like to ask a question.

1 **COMMISSIONER SKOP:** Yes. I just want to make
2 sure I'm understanding, because we're flipping through
3 the pages. You're looking at the cross section of the,
4 the soil top layers; is that correct? Okay. A
5 different one. Never mind. I'll reserve my question.

6 **COMMISSIONER EDGAR:** Thank you.

7 Mr. Rehwinkel.

8 **MR. REHWINKEL:** Okay. Thank you. Yes.

9 **BY MR. REHWINKEL:**

10 **Q.** The star shows that the site is, is on what
11 would be kind of medium/fine sand and silt; is that
12 right?

13 **A.** Just for clarification, let me verify you're
14 on Figure 2.3-17?

15 **Q.** I apologize. Yes, that's correct.

16 **A.** All right. What this document shows is what
17 is present within ten feet of the land surface. So at
18 the star location it would be the top ten feet surface
19 is medium/fine sand and silt.

20 **Q.** So if you, if you go back to the prior page
21 and you look under the column that's headed Geology and
22 Lithology, the sand is at the top.

23 **A.** I would characterize it as sandy soil.

24 **Q.** Okay. And as you go down vertically, you
25 encounter under the blocks that are under sand, sand and

1 clay, phosphate, sand limestone and dolostone, limestone
2 and dolostone, limestone and dolostone, et cetera. And
3 to, to the left under Stratigraphic Unit shows the
4 classification of those strata under the geological
5 classification system; is that right?

6 **A.** That's correct.

7 **Q.** Okay. Now the Levy site and the issues that
8 are part of the geotechnical presentation you made to
9 the NRC as part of your LWA and your COLA relate
10 primarily to the Avon Park foundation -- Formation; is
11 that right?

12 **A.** That is correct.

13 **Q.** Okay. So the Avon Park Formation is the, the
14 formation that would be most impacted by the
15 geotechnical analysis that the NRC staff would be making
16 of your filing; is that right?

17 **A.** That is correct.

18 **Q.** Okay. And right above the Avon Park
19 foundation (sic.) is Ocala Limestone; is that right?

20 **A.** That is correct.

21 **Q.** As it shows here. Now --

22 **A.** If it's present.

23 **Q.** Yes. Let's turn to the last page of the
24 exhibit, and this is Figure 2.3-18, and it shows the
25 regional aquifer system analysis; is that correct?

1 **A.** Yes. I see this as Figure 2.3-18, regional
2 aquifer system analysis.

3 **Q.** Okay. And just for the record, the yellow
4 highlighting on here is mine, not, not what, part of
5 what you filed.

6 But is it correct that the, on the right-hand
7 side --

8 **COMMISSIONER EDGAR:** Mr. Rehwinkel, I'm sorry,
9 one more time. Commissioner Skop -- and maybe a time
10 after that, too. Commissioner Skop.

11 **COMMISSIONER SKOP:** Thank you, Madam Chair.

12 Just to Mr. Rehwinkel and to the witness, I
13 just want to make sure I'm understanding this particular
14 figure, and I was a page ahead of you as I was trying to
15 form my question. But the yellow line that you drew,
16 Mr. Rehwinkel, is the section view from D to D prime.
17 And that, is that the cross section that is illustrated
18 in the top left-hand corner?

19 **MR. REHWINKEL:** That was my next question.
20 Yes.

21 **COMMISSIONER SKOP:** All right. Thank you.

22 **BY MR. REHWINKEL:**

23 **Q.** Is that, is that correct, Mr. Miller?

24 **A.** I'm not familiar enough with this graphic to
25 make that, make that determination. However, I do know

1 that there, the limestone has slope in that area. And
2 in the case of the Levy nuclear site, it's Avon Park
3 which comes closest to the surface. As a matter of
4 fact, that's represented up in the inset figure where it
5 says Levy Nuclear Plant location, and you can see, if
6 you follow the shaded crosshatched area, it's
7 predominantly the Avon Park Limestone.

8 Q. Okay. So where you see at the bottom of that
9 inset the word "Cedar Key Limestone," and line that goes
10 up from that points to a little, tiny piece of Ocala
11 Limestone; is that correct?

12 A. I see that. Yes.

13 Q. Okay. But surrounding that is, everything
14 that touches the surface in the crosshatching is in the
15 Ocala Limestone and Lake City Limestone undifferentiated
16 strata; is that right?

17 A. Again, I'm trying to interpret the graphic
18 because I've not seen this in quite a while. And as I
19 looked at it again, I do agree that the D to D prime is
20 the, what you characterize as that yellow line that
21 you've marked on the larger figure. It's a cross
22 section.

23 I cannot discern because the granularity of
24 this image is not so great in the Levy Nuclear Plant
25 area location, but I see either Avon, Avon Park

1 Limestone at the surface or Ocala Limestone at the
2 surface, and in some places farther on up you get
3 Suwannee Limestone and others. But at the Levy Nuclear
4 Plant location it's dominated by the Avon Park.

5 Q. Okay. So it looks like on this that the line
6 that comes from Levy Nuclear Plant location touches what
7 is Avon Park Limestone as it comes to the surface; is
8 that correct?

9 A. That's what this graphic appears to show.

10 Q. Okay. And that's what you filed with the NRC.

11 A. That's my understanding from my general
12 understanding of the geology of the site.

13 Q. Okay. And I ask you these questions because
14 isn't it true that the geology of the site was very
15 crucial with respect to the evaluation and consideration
16 by the NRC of your LWA?

17 A. I would answer your question as it's certainly
18 relevant. As the NRC makes a deliberation on the LWA,
19 they need to understand the geology and how the
20 foundation design is going to progress to be able to
21 make that determination.

22 Q. And you recognize when you -- well, let me ask
23 it to you this way. Isn't it true that selecting the
24 site for your nuclear plant is a crucial part of the
25 planning of your, of the construction of a nuclear

1 plant?

2 **A.** The site selection is probably the most
3 critical first step you take.

4 **Q.** Okay. And one of the major considerations
5 that you undertook was a site that would support various
6 needs for location to transmission, et cetera, but, but
7 significantly geology.

8 **A.** Yes. And I was involved and led the siting
9 study for the Levy site, and we considered, as you said,
10 geology or geotechnical features, we considered
11 availability of water, the ability to deliver the
12 transmission capacity from that site, other parameters
13 such as nearby land uses, all of those were considered,
14 but certainly geology and geotechnical is an area that's
15 very significant to that decision-making.

16 **Q.** Okay. And is it fair to say that from a time
17 constraint standpoint you were fairly challenged to get
18 a site selected such that you could meet a date that you
19 identified in your need analysis?

20 **A.** I would not characterize it that way, sir.
21 Because as when we started the siting process in late
22 2005, we had not established the 2016 in-service date at
23 that time. Our goal was to identify a site and start
24 the process, and then build a schedule that would then,
25 you know, yield the in-service date we desired.

1 I would characterize it more as bookends. You
2 have a, you'll have a need that'll establish the end
3 date, the in-service date, but you cannot start until
4 your site is selected because you must have that to
5 begin to do the analysis on that particular site. But
6 the siting would drive the overall schedule. It cannot
7 start before that --

8 Q. Okay.

9 A. -- until the site is selected.

10 Q. So was it -- is it fair to say that by the
11 time you selected a site, you were approaching a very
12 critical stage to meet a 2016 in-service or COD date?

13 A. It would be correct to say that as we selected
14 the site and announced it in December of 2006, we had
15 approximately 18 months to be able to complete an
16 application and submit it in July of 2008 that would
17 yield an overall schedule of 2016.

18 Q. Okay. So that was your window of opportunity
19 to develop a COLA, the 18 months?

20 A. For a 2016 in-service date.

21 Q. Okay. Yes. And sometime between the
22 December 2006 announcement of the site and the first
23 part of 2007 you realized, did you not, that you would
24 need an LWA in order to meet the 2016 COD?

25 A. During 2007, yes, we did identify the fact

1 that an LWA would be necessary for the Levy site to
2 achieve a 2016 in-service date.

3 Q. And would it be fair to say that the LWA that
4 you envision would be somewhat of a linchpin in meeting
5 that schedule?

6 A. It was -- yes, it was an important element. I
7 don't know if the term "linchpin" is the correct phrase.
8 But it was certainly an important element of the overall
9 schedule to achieve the mid 2016 date.

10 Q. Did you realize at the time you decided you
11 needed an LWA that without an LWA and the ability to
12 do -- or the ability to do the dewatering and excavation
13 before the issuance of a COL, that you would not be able
14 to meet the 2016 COD?

15 A. Yes. Yes. As the schedule was built and as
16 the schedule was presented in our need determination
17 last year, it actually incorporated LWA as an integral
18 part of that schedule that was necessary to achieve a
19 mid 2016 in-service date.

20 Q. Okay. Now having established the need for an
21 LWA and the time frame for an LWA, that, that played a
22 significant role in the negotiation of the EPC, did it
23 not?

24 A. The -- I wouldn't say -- it's not a
25 significant role. It is a parameter that affects the

1 execution of the EPC that had to be considered in the
2 timing of how the EPC would flow from a work
3 perspective.

4 **Q.** Well, did the LWA influence the cash flows
5 that you negotiated within the EPC?

6 **A.** No, and let me explain why. Because the LWA
7 scope of work which currently -- which would have been
8 diaphragm wall installation, permeation grouting,
9 excavation dewatering then engineered backfill, mud mat,
10 and that sequence all through that, that scope of work
11 has to be done regardless of whether it's authorized
12 through an LWA or authorized through a COL. Because it
13 is necessary to do that to be able to establish the
14 conditions for the first pour of safety-related
15 concrete. So that scope of work and the cost of that
16 scope of work is in the EPC irrespective of what
17 regulatory approval authorizes it.

18 **Q.** Okay. I think your question was directly
19 responsive to the question that I asked, but I don't
20 think I asked the question I intended.

21 **A.** Okay.

22 **Q.** So my question is this, the, the ability to do
23 the work that was subsumed ultimately in the LWA
24 directly affected the schedule that influenced the cash
25 flows in the EPC; is that correct?

1 **A.** Yes.

2 **Q.** Okay.

3 **A.** The milestones that are in the EPC, such as
4 first concrete pour, they assume certain regulatory
5 approvals in advance of that. And so those milestones
6 do flow assuming that an LWA was authorized in the
7 current version of the EPC.

8 **Q.** Okay. And without the LWA or the ability to
9 do the work that was subsumed in the LWA, the EPC that
10 you negotiated would not meet the reality of meeting a
11 COD of 2016; is that right?

12 **A.** State your question again. It was --

13 **Q.** Okay. Without doing the work that was in the
14 LWA prior to 2012, the, the milestones and the cash
15 flows that you negotiated in the EPC would be
16 meaningless; is that correct?

17 **A.** The phrase "meaningless" is not an accurate
18 representation. I would say to you that without meeting
19 the regulatory, getting the regulatory approval that the
20 schedule was based on, that means that the
21 preconstruction work in advance of the COL that is
22 governed by the LWA, that scope of work, that work would
23 then necessarily have to move in time. And so the
24 schedules which were in the EPC and the associated cash
25 flow that goes with them would be changed. They

1 wouldn't be meaningless because a lot of that work would
2 be -- you can use that same information to move it in
3 time.

4 **Q.** So my question -- and I understand. That's a
5 fair answer to my question. But with respect to meeting
6 a 2016 date, not achievable if you had to do the LWA
7 work inside of the COL; is that correct?

8 **A.** It is correct to say that without an LWA
9 approval in advance of the COL, the schedule that's in
10 the current EPC could not be executed as it exists.

11 **Q.** Okay. And there is no way that you would
12 proceed under an EPC with -- let me strike that
13 question.

14 So having determined that -- well, we've
15 established that the LWA was critical to meeting the
16 schedule that you negotiated in your EPC; is that
17 correct?

18 **A.** That's correct.

19 **Q.** Okay. That in turn affected your
20 negotiations -- well, let me say this. That in turn
21 affected your ability to lock down joint owner
22 commitments; is that correct?

23 **A.** No. I don't see the connection you're making.
24 I don't understand your question.

25 **Q.** Okay. Negotiating towards certain milestones

1 within the EPC drove your ability to get commitments
2 from joint owners; is that correct?

3 **A.** I believe I understand your question is is
4 the, was the timing and the ultimate execution of the
5 EPC related to the timing and execution of joint owner
6 agreements?

7 **Q.** Yes.

8 **A.** Is that your question?

9 **Q.** That's my question.

10 **A.** The answer is those are linked together, and
11 we would expect that the EPC would be executed and then
12 you would follow that with the joint owners' agreements.
13 And so they are linked in that perspective.

14 **Q.** Okay. Is it fair to say that there's kind of
15 a domino analogy? Is it the LWA being done at the time
16 you assumed is linked to the assumptions about when,
17 about how you structure your EPC that you're going to
18 agree to, which is also then linked to what you can
19 negotiate with joint owners?

20 **A.** I don't agree with the term "domino." But it
21 is accurate to say that the EPC considered the LWA as
22 part of the regulatory approval, and so the schedules in
23 the EPC reflected the ability to, to complete certain
24 work in advance of first concrete as authorized by the
25 NRC under an LWA. And then following through with that,

1 then obviously the final execution of the EPC, as I said
2 earlier, that is linked to the joint owner agreements.

3 Q. Okay. Well, if you -- your testimony has been
4 that absent execution of an EPC, you could not get legal
5 commitments from joint owners for the LNP project.

6 A. My testimony is, just to be accurate, is that
7 we, it was our intention to execute the EPC. And in
8 advance of that, we would have negotiations with joint
9 owners. And then once the EPC was executed, that would
10 then afford the ability to close the joint owner
11 negotiations.

12 Q. Okay. Were any joint owners willing to sign a
13 binding commitment to the project without knowing what
14 the EPC agreement would look like and execute it --
15 without seeing an executed EPC?

16 A. I was not involved directly in those
17 negotiations, so I cannot answer your question.

18 Q. Okay.

19 A. I cannot answer that.

20 Q. So that might be better asked to Mr. Lyash?

21 A. That would be correct.

22 Q. Okay. So is it -- it's true, is it not, that
23 your testimony before this Commission is that the NRC's
24 determination on an LWA is the sole cause for the delay
25 in LNP schedule?

1 **A.** It is my, it is my testimony that the LWA
2 determination by the NRC necessarily drives a schedule
3 shift in the Levy project.

4 **Q.** And when you -- I asked NRC's determination.
5 I think in your testimony you characterize it as the NRC
6 staff's determination. Is there a difference?

7 **A.** In this case I would not characterize it.
8 When I refer to NRC or NRC staff, I'm talking about the
9 collective NRC organization.

10 **Q.** Okay. And do the Commissioners at the NRC
11 make, have any role in deciding whether or not they're
12 going to -- or the schedule of the LWA?

13 **A.** In this particular case, no, the Commissioners
14 were not involved in this determination of whether an
15 LWA would be granted in advance of the COL. That's done
16 at the staff level.

17 **Q.** Okay. That's something that's delegated to
18 them?

19 **A.** It's their responsibility. It's not
20 necessarily a delegation.

21 **Q.** Okay. And you also assert or testify that you
22 did not know that the NRC staff would decide that it
23 would review the LWA concurrently with a COL; is that
24 correct?

25 **A.** It is correct. We absolutely had no previous

1 insight or knowledge that the NRC would not grant an LWA
2 in advance of the COL prior to January 23rd, 2009.

3 Q. Okay. And specifically your testimony is that
4 your first indication that the NRC staff would do so,
5 which is place the review of the LWA inside of the COL
6 review, was on January 23rd, 2009, and not a, not a
7 minute sooner?

8 A. That is correct.

9 Q. Okay. And by saying this, are you also
10 testifying that you could not reasonably have known that
11 this would be the outcome, this meaning the decision you
12 got from the NRC staff on January 23rd?

13 A. Yes. I am testifying that I would not
14 reasonably have known that outcome based on the ongoing
15 interactions we had with the NRC and the actions that
16 they were taking as late as December 4th of 2009 (sic.)
17 where our project manager, his name was Brian Anderson,
18 made public statements about the length it takes for the
19 entire review process for an LWA.

20 Q. Okay. Now I'm trying to limit my questioning
21 to --

22 **COMMISSIONER EDGAR:** Mr. Rehwinkel, just a
23 moment.

24 **MR. REHWINKEL:** Okay.

25 **COMMISSIONER EDGAR:** Commissioner.

1 **COMMISSIONER SKOP:** Just potentially on the
2 record, I believe the date you said was December 2009.
3 I don't think we've got there yet. I thought that you
4 might have --

5 **THE WITNESS:** Thank you, Commissioner.
6 December 4th, 2008.

7 **BY MR. REHWINKEL:**

8 **Q.** Now just to be clear, and I'm limiting my
9 cross-examination to your direct testimony --

10 **A.** I understand.

11 **Q.** -- and I'm not asking you to not, to act like
12 you don't know certain things. But what you just
13 mentioned, December 4th, 2008, that appears nowhere in
14 your direct testimony; is that correct?

15 **A.** That is correct.

16 **Q.** Okay. And you did not mention that date in
17 your deposition that I took on December -- on July 2nd,
18 2008, did you?

19 **A.** That is correct.

20 **Q.** Okay. And that deposition lasted about eight
21 hours; correct?

22 **A.** About nine.

23 **Q.** Nine? Okay. That is not a precursor to how
24 long this is going to take, hopefully.

25 (Laughter.)

1 You also contend in your testimony here that
2 you reasonably believed that the NRC staff could review
3 the application for the LWA because you put it together
4 in 18 months, and that they should be able to look at it
5 and make a determination before -- in what time period?

6 **A.** The time period would be approximately 30
7 months. And let me amplify what you just said.

8 What we thought was based on the announcement
9 of the site in December 2006 through the period that we
10 submitted our application in July 2008, about 18 months,
11 we investigated the site, we drilled over 108 borings
12 and selected soil samples and core samples. We did
13 geotechnical analysis of that site, foundation design,
14 we completed all that work in 18 months and handed over
15 that analysis to the NRC staff as part of our submittal.
16 So we reasonably expected for the NRC to be able to
17 complete their LWA review in the, in the time frame we
18 requested in the letter that we submitted July of 2008.

19 **Q.** Okay. And when you say you did the analysis
20 over that 18-month period, it's not your testimony that
21 you handed over every bit of analysis that you did for
22 site characterization, et cetera, to the NRC staff; is
23 that right?

24 **A.** No, that's not what I meant. As you know, the
25 application itself is a summary of analysis. And so

1 what we do is we make available through requests for
2 additional informations, or RAIs, analysis that they
3 request on demand, the basis for some summary statement
4 or some analysis summary that shows up in the
5 application itself.

6 Q. Okay.

7 A. But the point is that work was done and
8 available to support that application going in July
9 2008.

10 Q. I understand. Thank you.

11 You've also testified that you believed that
12 the fact that dewatering and excavation measures have
13 been done elsewhere in Florida on a similar scale under
14 similar conditions supported your view that the timeline
15 you just described, a 30-month review, could be
16 accomplished; is that correct?

17 A. That was pertinent, yes. That is correct.
18 That is pertinent information to this decision-making
19 because there are lots of examples of this being done.
20 And as you'll see in the rebuttal testimony, I have an
21 exhibit that lists some of those for convenience.

22 Q. Now just for the record, none of those sites
23 involved nuclear facilities or where there was public
24 safety issues being reviewed in a nuclear power plant
25 environment; is that correct?

1 **A.** Your statement is not correct because public
2 safety is not a nuclear issue. So, for example, the
3 work done at the Capitol building when they did the
4 expansion for the visitor center, which used dewatering
5 techniques of diaphragm walls, that's certainly public
6 safety. But in the context of a nuclear application and
7 protection of the public health and safety by nuclear
8 reasons, I'm not aware of a site that had a dewatering
9 while grouting configuration like this.

10 **Q.** Thank you. Is it also your testimony or can I
11 glean from your testimony that the perception of the
12 ability of the NRC staff to meet this 30-month time
13 frame was PEF's management's collective belief as well?

14 **A.** Ask your question again.

15 **Q.** Okay. Yeah. Let me ask it, let me ask it a
16 little bit different way.

17 All of the things that we've reviewed that
18 influence your belief that the NRC staff could meet this
19 30-month time frame, was that the unanimous collective
20 belief of PEF's management?

21 **A.** I don't know if the right phrase is
22 "unanimous."

23 The way this process works is we, my
24 organization is involved in industry groups and
25 licensing interactions with the NRC. And we provide

1 recommendations and information to our senior
2 management, and they depend on us for that information.
3 So to say it's unanimous is not the right
4 characterization of how this works. It's an informed
5 process where we make recommendations.

6 **Q.** It is true, is it not, that no one in
7 management challenged the assessment that the 30-month
8 schedule could be met?

9 **A.** I'm not sure that the word "challenged" is the
10 correct word. We discussed it, we had questions and
11 back and forth dialogue. And based on the
12 reasonableness of what we had heard from industry
13 interactions and NRC statements, we believed that was
14 representative of what would actually happen with an LWA
15 execution.

16 **Q.** When you say we had back and forth dialogue,
17 are you talking about within your organization or above
18 with the people that you reported to?

19 **A.** When, when I talk about back and forth
20 dialogue, I'm talking about as I interfaced with my
21 senior management and the leadership of our company. As
22 we talk about subjects, there's a dialogue back and
23 forth on various things and we discuss those.

24 **Q.** Do you have with you, and I'm not going to ask
25 you about your rebuttal testimony, but do you have with

1 you your rebuttal testimony and Exhibit GM-7?

2 **A.** I do.

3 **Q.** Do I have it? I just had it.

4 Can I ask you to turn -- well, first of all,
5 are you familiar with what GM-7 is?

6 **A.** Yes, I am.

7 **Q.** Is this a document that you were involved in
8 the preparation of?

9 **A.** Yes, it is.

10 **Q.** Okay. Can I ask you to turn to Page 4 of 6?

11 **A.** I'm there.

12 **Q.** Okay. Now this is, this is an interrogatory
13 that, that purports, the answer purports to describe all
14 discussions that the company had with the NRC prior to
15 and following the submission of the LWA.

16 **A.** That is correct.

17 **Q.** Okay. Now were you present at, at any of
18 these, any meetings that are described here?

19 **A.** Yes. I was present at some of those meetings,
20 but not all of them. And I was present on some of the
21 calls that are in here.

22 **Q.** Can you tell me which ones?

23 **A.** So, for an example, I would have been at the
24 September 12th call, I believe I was there. Certainly
25 the January 23rd call I was on. There was management

1 meetings in here that I was involved in. So different
2 ones. For example, I was at the February 20th meeting
3 as an example. So not all, but some of those meetings I
4 was present at. And certainly the one that was the most
5 significant was the January 23rd, 2009. I was there.

6 Q. You mean you were on the phone?

7 A. I was on the phone. Correct.

8 Q. Okay. But you filed your LWA on
9 September 12th; is that correct? You're -- let me, let
10 me step back.

11 You supplemented your LWA on September 12th,
12 2008; is that correct?

13 A. Correct. We filed as part of our COLA
14 application an LWA request in July 2008, and we then
15 updated that request in a September 12th submittal. And
16 we had a call September 5th with the NRC prior to that
17 submittal.

18 Q. The September 12th supplement included in the
19 LWA the dewatering and permeation grouting aspects of
20 what became your LWA request; is that correct?

21 A. The -- it is correct to say that those two
22 were added as part of the LWA scope, and then there was
23 scope that was removed from the original LWA request
24 also.

25 Q. The dewatering, the, the installation of the

1 wall and the, the permeation grouting to prepare a
2 bottom for the excavated pit were the crucial parts of
3 the LWA; is that correct?

4 **A.** It's not correct the way you phrased it. The
5 dewatering is not an NRC LWA activity. The installation
6 of the diaphragm wall and the installation of the
7 permeation grouting were added per the NRC's request and
8 were part of the scope. However, dewatering and
9 excavation is not part of the scope of LWA.

10 **Q.** Okay. So what I should have asked you is were
11 the diaphragm wall and the permeation grouting aspects
12 of the LWA the crucial aspects of the LWA in order to
13 meet your, your 2016 COD?

14 **A.** They were important, but I wouldn't use the
15 word "crucial" because what we did when this decision
16 was made to revise and update the September 12th, 2008,
17 letter to the NRC reducing scope of the LWA and adding
18 scope to it, we then went back to our preconstruction
19 logic schedule and worked on how we could take the time
20 back out associated with this change and we were able to
21 overlap certain activities and still achieve an
22 in-service date of mid 2016 by overlapping some of the
23 work for the dewatering wall installation and the grout
24 installation.

25 **Q.** Okay. But once the permeation, permeation

1 grouting and the diaphragm wall were added to the LWA,
2 you could not do those activities without authorization
3 in the, in the LWA; is that correct?

4 **A.** That is correct. Without the LWA being
5 subsequently changed to remove those, we were not
6 allowed to install those two items without prior LWA
7 issuance.

8 **Q.** Okay. So once those items were put inside of
9 the LWA and dependent upon NRC authorization to proceed,
10 they became crucial to achieve in an LWA in order to
11 meet your 2016 COD; is that correct?

12 **A.** Again, your word "crucial," it is -- I
13 wouldn't characterize it as any more crucial than the
14 placement of the engineered backfill, which is part of
15 that same scope of the LWA. It became an important
16 component of the LWA scope that had to be considered in
17 the schedule development.

18 **Q.** In the meetings that are described in GM-7
19 after September 12, 2008, that would be the
20 October 1 call; is that correct?

21 **A.** Yes.

22 **Q.** October 6th is just a letter -- not just, but
23 it is a letter. It's not a meeting.

24 **A.** It's not a meeting.

25 **Q.** Are those the only two meetings post

1 September 12th, 2008, that deal with communications
2 about the LWA schedule?

3 A. From our --

4 Q. Between the company and the NRC?

5 A. Right. From our recollection, as we created
6 this interrogatory response, we have an ongoing dialogue
7 with the NRC routinely, but these are the dates that we
8 remember discussions concerning LWA and that's why these
9 were added on to this schedule. But there were
10 discussions in between these or unrelated topics on
11 these same dates that could have occurred because we
12 have a project manager who we interface with routinely.

13 Q. Okay. Can you tell me the dates of those
14 additional --

15 A. I cannot, sir, because they're so frequent
16 that it's -- there are calls routinely made, so I cannot
17 tell, tell you those.

18 Q. Okay. And you mentioned a December 4th
19 statement by the NRC. You didn't include this on this,
20 this interrogatory response for what reason?

21 A. We did not include it because we had not
22 identified that in his transcript at the time we created
23 this response. We certainly would have otherwise. And
24 I would tell you the reason that's the case is we had
25 many interactions with the NRC all throughout 2008. And

1 when the NRC project manager made that statement that
2 the entire LWA review process could be completed in a
3 ballpark 24 months, we didn't consider it a remarkable
4 statement. It's what we would expect him to say, so we
5 didn't remember him saying it in this public forum in
6 response to a public question. So as we created this
7 interrogatory response, it did not, you know, we didn't
8 remember that as a key event, and it was discovered as
9 part of our preparation of our rebuttal testimony in a
10 transcript.

11 Q. Is it, is it true that Mr. Thompson told you
12 about it?

13 A. It is true that Mr. Thompson found it in the
14 transcript --

15 Q. Okay.

16 A. -- of the public meeting.

17 Q. Mr. Thompson was not advising you at any point
18 in time about the filing of the LWA, was he?

19 A. No.

20 Q. Okay. Isn't it true that after you filed the
21 LWA or nearing time of the filing of the LWA
22 supplemental on September 12th that company officials
23 met with senior NRC officials and told them that they
24 were asking for an aggressive schedule for the COL
25 including the LWA, the environmental impact statement

1 and the safety report?

2 **A.** Yes. It is correct to say that senior, that
3 senior management in our company met with NRC senior
4 officials in the September time frame.

5 **Q.** Is it also correct that they said that the,
6 that the schedule was aggressive?

7 **A.** At the time -- I was present at that meeting.
8 I don't remember the exact language, but I think they
9 probably did acknowledge that we were asking for an
10 aggressive schedule and they were reviewing it.

11 **Q.** And by aggressive, I mean it was aggressive
12 with respect to the typical milestones that you would
13 expect to be approved by the NRC in their review of a,
14 of a COLA and LWA?

15 **A.** No. Specifically I would consider it to be
16 aggressive with respect to the EIS schedule. The LWA
17 approval requires an EIS or a partial EIS. And in our
18 company's decision-making, we chose to have a full EIS
19 available in support of the LWA decision. So we knew
20 that the EIS constrained the LWA, so the aggressive date
21 we were particularly asking for related to an EIS. That
22 would typically take approximately 24 months, and we
23 were asking for something less than that so the EIS
24 would be available to support an LWA decision.

25 **Q.** Would you agree that the company -- wouldn't

1 you agree that the company recognized that they were
2 requesting an aggressive schedule not for just one of
3 the milestones but generally for the review schedule?

4 **A.** No, I would not agree with that.

5 **Q.** You wouldn't agree with that?

6 **A.** No.

7 **Q.** You wouldn't agree that you were asking for
8 delivery of each of the LWA, the environmental impact
9 statement and the COLA at aggressive time points in what
10 you thought would be a typical consideration timeline?

11 **A.** No, and let me explain why. Again, we
12 announced our site December 2006. We developed a full
13 application and submitted it July 2008, in about 18
14 months. And so the overall time frame for the COL we
15 requested and for those timeframes for the LWA and EIS
16 we thought were reasonable considering the amount of
17 time it took us to conclude our activities and deliver
18 that analysis, a summary analysis to them.

19 **Q.** Okay. Did the NRC staff think your schedule
20 was aggressive?

21 **A.** Are you asking me did they say that?

22 **Q.** Yes.

23 **A.** I don't recall if they said those specific
24 words. I think they probably did with regard to the EIS
25 because it's typically 24 months.

1 **Q.** So would you agree with the statement that the
2 ultimate COLA issue that you were asking for was a, was
3 a relatively aggressive set of milestones?

4 **A.** No, I wouldn't agree. With the overall COL
5 date?

6 **Q.** Yes.

7 **A.** No, I would not agree with that. Again, put
8 in perspective, we developed our application fully in 18
9 months. And from the period of July of 2008 through
10 what we were asking for, which was, what, December of
11 2011 or January of 2012, that's almost 42 months. And
12 so we did not think that was unreasonable.

13 **MR. REHWINKEL:** Okay. Commissioner, Madam
14 Chairman, I have a line of questioning that I am about
15 to go into that involves use of cross-examination
16 exhibits. And it's almost 1:00. Would this be a good
17 time?

18 **COMMISSIONER EDGAR:** Yes, sir. I think that
19 you and I are thinking along the same line. I was just
20 going to ask you if this might be an appropriate
21 breaking spot.

22 **MR. REHWINKEL:** Yes.

23 **COMMISSIONER EDGAR:** So if -- you know, it may
24 be helpful on the lunch break to go ahead and pass out
25 documents so that we have them all before us and we can

1 go through and mark them at the beginning. But it is
2 your pleasure, your, your cross.

3 **MR. REHWINKEL:** I think what I would like to
4 do, since they are, 90 percent of them are red,
5 confidential --

6 **COMMISSIONER EDGAR:** Oh, I did not, I did not
7 realize that. Okay.

8 **MR. REHWINKEL:** I will, I will do that though
9 right before we, when we get the one-minute warning or
10 whatever, we can do it then so we can make sure that
11 everything is safeguarded correctly.

12 **COMMISSIONER EDGAR:** Okay. Thank you. We
13 will, again, of course, work with you and all the
14 parties to do that.

15 All right. We are going on lunch break until
16 2:15. We are on recess.

17 (Recess taken.)
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