**BEFORE THE FLORIDA PUBLIC SERVICE COMMISION**

**DOCKET NO. 100009-EI**
**FLORIDA POWER & LIGHT COMPANY**

**IN RE: NUCLEAR POWER PLANT COST RECOVERY AMOUNT TO BE RECOVERED DURING THE PERIOD JANUARY - DECEMBER 2011**

**REBUTTAL TESTIMONY OF:**

**NILS J. DIAZ**

COM 5
APA 1
ECR 6
GCL 1
RAD 1
SSC
ADM
OPC
CLK CE.RPR

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# AUGUST 3, 2010

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

A. My name is Nils J. Diaz. My business address is 2508 Sunset Way, St. Petersburg Beach, Florida, 33706.

**Q. Have you previously submitted direct testimony in this proceeding?**

A. Yes.

**Q. What is the purpose of your testimony in this proceeding?**

A. The purpose of my testimony is to address certain assertions of Witness Arnold Gundersen on behalf of the Southern Alliance for Clean Energy regarding Florida Power & Light Company's (FPL) project to license and preserve the option to construct new reactors at the Turkey Point site – known as the Turkey Point Units 6 and 7 project (PTN 6&7).

**Q. Please summarize your rebuttal testimony.**

A. First, I address the misleading use of the term "site banking" as applied to FPL's PTN 6&7 project by Witness Gundersen. This term is applicable to the NRC's Early Site Permit Licensing (ESP) process,

which allows applicants to "bank" a site for up to 20 years, but would not permit construction. In contrast, FPL has chosen to apply for a Combined Operating License (COL) that would permit construction of a nuclear power station at the site upon issuance. This regulatory approach provides a reliable framework for nuclear power plant licensing that will reduce risk for COLA applicants and utility customers when compared to the previous licensing process for commercial nuclear power reactors.

Second, my rebuttal testimony addresses Witness Gundersen's assertions that there are numerous scheduling obstacles to the licensing and construction of PTN 6&7. The issues that have arisen during the COL application (COLA) process are normal occurrences expected during the restart of the comprehensive safety review and permitting intrinsic to nuclear power plant licensing and construction in the United States. These issues are being dealt with using integrated project management tools to systematically enhance effectiveness and schedules at both FPL and the NRC.

Finally, my rebuttal testimony addresses Witness Gundersen's unsubstantiated conclusions regarding an alleged safety issue regarding the AP1000 design. Based on my review, NRC and FPL project management have established achievable review schedules,

and based upon available information, any delays should be minor and of no consequence to the licensing of the PTN 6&7 project.

**Q. Do you have any comments on Witness Gundersen's testimony alleging that FPL is "banking" the PTN 6&7 site?**

A. Yes. Pursuant to federal regulations, "Site banking" is the accepted process of obtaining an ESP from the NRC, including requisite environmental, emergency and physical protection planning, for a nuclear power plant. While an ESP resolves the sitting issues associated with a new nuclear power plant, it does not authorize plant construction or operation. In contrast to Gundersen's testimony, FPL has applied for a COL that would allow site preparation and construction upon issuance; and, operation when the facility is constructed as licensed. This approach assures that when circumstances are appropriate, FPL can act to initiate the construction phase of the project without the delay of then applying for a COL which would have been present had FPL sought an ESP rather than a COL. FPL's approach is a prudent, stepwise means of obtaining necessary approvals from the NRC prior to incurring major construction outlays that would be detrimental to customers. In taking this incremental approach, FPL is following the regulatory process set forth in federal law (the 1992 Energy Policy Act) and NRC regulations (10 CFR Part 52) for a single COL.

FPL is following a managed path to minimize uncertainties utilizing the lessons learned and the efficiencies gained from the lead reference plant for the AP1000 (Georgia Power's Vogtle Units 3 and 4 – the reference COL application or "RCOLA"), as well as accommodating the amended Design Certification schedule for the AP1000, with all the enhancements now incorporated into the AP1000 safety design. This plan is prudent and feasible, managed and supported by experts in every key area, and is designed to lead to plant licensing based on a realistic schedule.

Therefore, FPL's stepwise approach, focusing on the early construction and operating license for PTN 6&7, favors cost effectiveness, protects customers, and helps provide for the electrical needs of the State of Florida. Real world experts, with recognized expertise in every phase of reactor licensing, construction, and operation have reviewed and constructed the stepwise approach that FPL is following.

**Q. Can you comment on Witness Gundersen's testimony regarding the potential for licensing delays based on Generic AP 1000 design issues?**

A. Based on my experience with the Westinghouse AP1000 Design Certification safety reviews and final rule, which were completed while I was NRC Chairman, Witness Gundersen's conclusions regarding the

feasibility and schedule for the AP1000 Design Certification are incorrect. The majority of the safety technical issues for Amendment 17 to the AP1000 Design Certification have been reviewed, and remaining issues are on schedule for timely resolution, according to the NRC. The current schedule calls for the AP 1000 Design Certification Document Revision 17 Final Rule to be issued by September 2011, under a schedule that the NRC has described as "aggressive yet achievable." While it is clear that the NRC schedule relies on the reactor vendor providing quality submittals that resolve identified technical issues, there is nothing in the public documents or in the NRC's statements that would lead me to believe there is additional material uncertainty to the licensing process and schedule.

As discussed above, it is also notable that the PTN 6&7 project trails the schedule of Southern Nuclear's Vogtle Units 3 and 4 project, the lead reference plant that incorporates the AP1000 reactor technology in its COLA. This will favorably impact the efficiency and cost effectiveness of the PTN 6&7 project because FPL can incorporate lessons learned from the licensing of Vogtle Units 3&4 and several other COL applicants referencing the AP1000 technology that are ahead of FPL in the COL process.

With respect to the statements of David Matthews, the Director of the Division of New Reactor Licensing in NRC's Office of New Reactors

quoted by Witness Gundersen on pages 17-18 of his testimony, these statements simply summarize the well-established regulatory process for COLAs. An applicant for a COL must reference a completed Design Certification prior to the Mandatory Hearing on the COLA. This means that the selected technology safety issues resolved by the Design Certification cannot be challenged during the COL process; therefore, the COL cannot be issued until the Design Certification rulemaking is completed. None of these statements are novel or suggest any problem, issue, or delay in the NRC licensing process. Furthermore, when a COL applicant references a RCOL, the generic issues resolved during the reviews of the RCOLA are resolved for the applicant referencing the RCOLA. This is an effective, efficient, and transparent licensing process that leaves no doubt to the completeness and finality of the safety reviews and the fairness of the process, and protects FPL customers in the unlikely event of a delay in the COLA review schedule.

In my view, it is highly likely that a final rule will be issued for the AP1000 Design Certification according to the present NRC schedule or without significant delay. Therefore, the RCOLA review and subsequent regulatory activities should proceed in accordance with their schedule.

**Q. Do you agree with Witness Gundersen that there are other unresolved issues with the generic AP1000 technology that could further delay the potential licensing of the PTN 6&7 project?**

A. No, I do not. I am intimately familiar with the Design Certification of the AP600 and the AP1000 reactors. As a Commissioner and Chairman of the NRC, I participated in the review and decision-making regarding the safety of these reactor designs, including the containment design. Based on this body of work, I disagree that there is an unreviewed safety issue with the AP1000 containment. The AP1000 containment has been extensively reviewed and its passive safety features tested and rigorously modeled; these features have been accepted by a community of safety, materials and thermal-hydraulics experts and regulators after many years of in-depth review. The safety-focused design enhancements made to the Shield Building in 2009, after additional detailed analysis and recommendations by the NRC and supporting safety experts, are a clear demonstration of the level of review and acceptance that the AP1000 Design Certification has undergone, which has also and specifically focused on the Containment Building.

The fact that a subcommittee to the NRC's Advisory Committee on Reactor Safeguards (ACRS) (and not the full Committee as asserted

by Witness Gundersen) allowed the matter to be discussed at an ACRS subcommittee meeting does not make it a safety issue. The ACRS is an independent advisory body to the NRC Commissioners that conducts collegial meetings, and permit individuals or groups, to present views on issues that they may believe are safety issues. From my previous reviews and discussions with experts on the AP1000 containment and with ACRS members, I do not believe that there is an "unreviewed" safety issue that would compromise the integrity of the containment under accident conditions. I am more interested in the conclusions of the ACRS on the issue discussed by Witness Gundersen, rather than the unremarkable fact that a sub-committee of the ACRS entertained a presentation on an alleged safety issue in the AP1000 containment design.

In any case, it is unlikely that a schedule delay would occur due to the AP1000 containment design issue raised by Witness Gundersen. As discussed above, Westinghouse has submitted an Enhanced Shield Building Design addressing the issues that were raised by the NRC last year. Finally, as a former nuclear safety regulator, I would be concerned if no safety issues were raised during a comprehensive safety review of a new reactor design; indeed, many have been raised for 15 years of reviews and those worthy of consideration have been addressed and resolved. The fact that concerns can be raised

throughout the process is evidence of a healthy process that encourages and enables interested stakeholders to raise potential safety related issues.

**Q. Do you agree with Witness Gundersen that the uncertainties surrounding the licensing of new nuclear reactors will result in additional significant licensing delays for TP 6&7?**

A. No. I believe that the uncertainties that presently exist in the licensing process are minor and being aggressively addressed by both the NRC, the RCOLA applicant, FPL and other applicants under the same RCOLA. Therefore, based on available information, there should not be additional significant delays for the licensing of PTN 6&7.

Two of the three major components of the COL process -- the Design Certification and the ESP -- have now been fully tested. Four ESPs have been issued and four Design Certifications have been granted (with five Designs currently under final review by the NRC). Although no COL under Part 52 has been granted yet, and there are always uncertainties associated with such a comprehensive safety review, the COL process is also well underway, and the first COL license referencing the AP1000 reactor technology (Southern Nuclear's Vogtle Units 3 and 4) is about two years away from a final NRC decision. The fact that the PTN 6&7 project trails the schedule of the Vogtle project

should favorably impact the efficiency and cost effectiveness of the PTN 6&7 project because FPL can incorporate lessons learned from the licensing of Vogtle Units 3&4. FPL's project will also take advantage of experience of several other COL applicants referencing the AP1000 technology that are ahead of FPL in the COL process (Progress Energy Carolinas; Progress Energy Florida; South Carolina Electric & Gas; Duke Energy; Tennessee Valley Authority). Again, FPL's stepwise approach and deliberate position as a subsequent COL applicant, following the RCOLA, ensures that FPL customers are protected in the unlikely event that there are material delays in the COL review schedule.

While the issuance of a COL for PTN 6&7 cannot be guaranteed, it is highly likely that FPL will be able to obtain a COL for PTN 6&7 when the licensing review is completed, all environmental and safety reviews are completed, and with the expected AP1000 Amended Design Certification; all of the above are within FPL's proposed schedule. The NRC licensing process is thorough, complete, and demanding, yet it carries a regulatory predictability seldom matched: an applicant will be issued a license upon demonstration of compliance with safety and environmental requirements.

Finally, FPL Witness Jacobs is addressing the site-specific PTN 6&7 issues raised by Witness Gundersen.

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

A. Yes.