BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 070650-EI

In the Matter of:

PETITION TO DETERMINE NEED FOR TURKEY POINT NUCLEAR UNITS 6 AND 7 ELECTRICAL POWER PLANT, BY FLORIDA POWER & LIGHT COMPANY.

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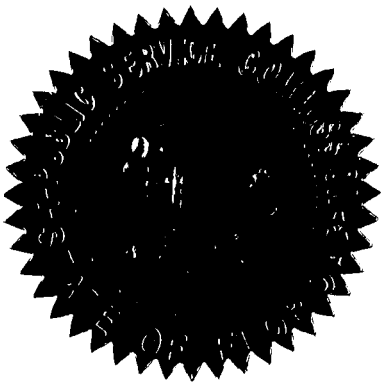

VOLUME 2

Pages 77 through 214

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PROCEEDINGS:	HEARING
BEFORE:	CHAIRMAN MATTHEW M. CARTER, II COMMISSIONER LISA POLAK EDGAR COMMISSIONER KATRINA J. McMURRIAN COMMISSIONER NANCY ARGENZIANO COMMISSIONER NATHAN A. SKOP
DATE:	Wednesday, January 30, 2008
TIME:	Commenced at 9:30 a.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	JANE FAUROT, RPR Official FPSC Reporter (850) 413-6732
APPEARANCES:	(As heretofore noted.)

I N D E X

WITNESSES

EXHIBITS

NUMBER:	ID.	ADMTD.
16		142
17 through 20		212

P R O C E E D I N G S

CHAIRMAN CARTER: Good afternoon. Can you guys hear me? I can't hear me. It's not because my hearing aid is not working, because I left it at home today.

We are now into our witness portion of the program, and I say program, process. I feel like I'm at church. The witness portion of our process here. And I suppose what we probably need to do is swear the witness in, is that right?

MR. LITCHFIELD: Yes, Mr. Chairman. And we have a second witness here who can be sworn at the same time, if you prefer to do that. Mr. Silva is seated in the gallery, as well.

CHAIRMAN CARTER: Mr. Litchfield, that's an excellent idea. We have both witnesses. Would you please stand and raise your right hand.

(Witnesses sworn.)

CHAIRMAN CARTER: You may be seated.

Mr. Litchfield, you're recognized.

MR. LITCHFIELD: Thank you, Mr. Chairman.

ARMANDO J. OLIVERA

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

DIRECT EXAMINATION

BY MR. LITCHFIELD:

Q Mr. Olivera, would you please state your name and

business address for us.

A Armando Olivera, 700 Universe Boulevard, Juno Beach, Florida.

Q And by whom are you employed and in what capacity?

A I am employed by Florida Power and Light as president of the company.

Q And have you prepared and caused to be filed 27 pages of prefiled direct testimony in this proceeding on October 16th, 2007?

A I have.

Q Do you have any changes or revisions to that testimony?

A No, I do not.

Q If I were to ask you the same questions today as are reflected in your direct testimony, would your answers be the same?

A Yes, they would.

MR. LITCHFIELD: Chairman Carter, FPL requests that the prefiled direct testimony of Mr. Olivera be inserted into the record as though read.

CHAIRMAN CARTER: The prefiled testimony will be accepted into the record as though read.

BY MR. LITCHFIELD:

Q Now, Mr. Olivera, you're sponsoring one exhibit to your testimony?

A I am.

Q Consisting of one page?

A Yes.

MR. LITCHFIELD: Mr. Chairman, that has been premarked for identification as Hearing Exhibit 16, I believe.

CHAIRMAN CARTER: Okay, thank you.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF ARMANDO J. OLIVERA

DOCKET NO. 07_____-EI

OCTOBER 16, 2007

Q. Please state your name and business address.

A. My name is Armando J. Olivera. My business address is 700 Universe Boulevard, Juno Beach, Florida 33408.

Q. By whom are you employed and what is your position?

A. I am the President of Florida Power & Light Company (FPL or the Company).

Q. Please describe your duties and responsibilities in that position.

A. I have overall responsibility for the operations of the Company.

Q. Please describe your educational background and professional experience.

A. I have a Bachelor of Science degree in Electrical Engineering from Cornell University and a Master of Business Administration from the University of Miami. I am also a graduate of the Professional Management Development program of the Harvard Business School. I was named President of FPL in 2003. My professional background is described in more detail in Exhibit AJO-1.

Q. Are you sponsoring an exhibit in this case?

A. Yes. I am sponsoring Exhibit AJO-1, which is attached to my direct testimony.

Q. What is the purpose of your testimony?

A. FPL is proposing to develop, as an important electric generation option for our customers, new nuclear generation to be added to FPL's system at the Turkey Point facility near Homestead, Florida, located in Miami-Dade County. FPL is seeking a determination of need for this project. My testimony provides an overview of FPL's request, and briefly addresses some of the key considerations underlying this project. Such considerations include: the importance of this project in achieving meaningful reductions in CO_2 and other "greenhouse gas" (GHG) emissions; the significant challenges we face in meeting the growing demand for electricity in the state of Florida; the need for system fuel diversity; the economic uncertainties and other risks associated with this project compared to other types of projects; how these considerations should affect the selection of the best resource options to meet Florida's expanding energy and capacity needs; and the critical importance of continued government and regulatory support for the development of new nuclear generation in this state.

Q. Please summarize FPL's request in this case.

A. This filing is the first step that must be taken in order to preserve new nuclear generation as a potential resource option for the period beginning in 2018. Between 2011 and 2020, FPL will need about 8,350 MW of firm capacity resources to continue to meet its reliability criteria. This large capacity need supports new nuclear power generation of between 2,200 MW to 3,040 MW, in combination with other generation, including as much renewable capacity, conservation and load control programs as are optimistically foreseeable. FPL is

requesting approval to pursue the option of constructing up to 3,040 MW of new nuclear generation, with the actual generating capacity of the units and the plant to be determined by FPL and approved by the Commission through the annual project and prudence review process, as project development continues, and as the most advantageous technology and size of units are determined. These units are proposed to be constructed at the existing Turkey Point site near Homestead, Florida and are referred to in FPL's Petition for a Determination of Need and supporting materials as FPL Turkey Point Nuclear Units 6 & 7 (Turkey Point 6 & 7 or the Project). To preserve the potential for 2018-2020 in-service dates for the Project, the earliest practical deployment schedule, substantial advance payments for long-lead procurement items will be required beginning in 2008. In connection with this determination of need, FPL is also requesting Commission confirmation that these advance payments made prior to the completion of the Project's site clearing work are reasonable, that they are properly characterized as "pre-construction costs," and will be recovered pursuant to the mechanism provided in the Commission's Nuclear Power Plant Cost Recovery Rule, Rule 25-06.0423, F.A.C.

Q. Please summarize the reasons that favor approval of FPL's request for a determination of need.

A. As discussed by witnesses on behalf of FPL, Turkey Point 6 & 7 will offer several important benefits, including the following:

- Providing the best available alternative for promoting fuel diversity within FPL's generation portfolio for the relevant period (Silva, Sim);

- Providing greater system reliability (Silva, Yupp);
- Mitigating the effect of volatility in natural gas prices (Silva, Yupp);
- Representing an important and significant step toward achieving greater U.S. energy independence from reliance on fuel sources in the Middle East and other volatile regions (Yupp);
- Reducing FPL's emissions per megawatt, including CO_2, for FPL's system on an average megawatt basis, playing a large and indispensable role in achieving meaningful reductions in GHG emissions (Sim, Kosky, Silva, Reed);
- Providing what is currently projected to be the best economic choice to meet future capacity needs (Sim).

Q. Have Florida policy makers recognized the need to encourage fuel diversity?

A. Yes. Actions have been taken recently at the state government level to endorse and encourage the development of a more diverse mix of fuel sources and technologies to be used in Florida's energy future. Two such major actions are as follows:

- Florida's Energy Plan, issued on January 17, 2006, emphasizes the importance of fuel diversity and avoiding reliance on any one fuel type such as natural gas.
- The Florida Legislature, as part of the 2006 Florida Energy Act (FEAct 2006), amended Section 403.519, Florida Statutes, to explicitly require the Commission to consider "the need for fuel diversity and supply reliability"

when making its determination of need for new electricity generating capacity.

While the Commission has always taken fuel diversity into account in approving new generation in the state of Florida, these recent actions have underscored the importance of fuel diversity and the increased emphasis on this subject as a matter of public policy.

Q. Have Florida policy makers recognized new nuclear power as an important component in an effort to maintain, if not improve, fuel diversity?

A. Yes. Also as part of the FEAct 2006, the Florida Legislature made significant changes to the siting process for a nuclear-fueled power plant with a view to facilitating the construction of new nuclear generation in the state. The legislation also added specific provisions to provide greater assurance with respect to the recovery of costs. These actions recognize the importance of nuclear generation for fuel diversity and system reliability and were designed to encourage utility investment in new nuclear power plants in Florida.

Likewise, this Commission has encouraged the development of nuclear generation in adopting the Nuclear Power Plant Cost Recovery Rule.

Further, this Commission expressed strong interest in new nuclear generation during the course of its deliberations over the FPL Glades Power Park advanced, clean-coal technology project, strongly suggesting the importance of finding

alternate resources to bridge to the point at which new nuclear capacity can be brought on line.

Q. Have Florida policy makers also recognized new nuclear power as an important element in the effort to reduce GHG emissions, particularly CO_2?

A. Yes. Governor Charlie Crist recently signed Executive Order No. 07-127, targeting significant reductions in the levels of GHG. Regardless of the specifics of any such program or regulation that may be instituted in Florida, it is clear that Florida utilities will need enormous amounts of non-GHG emitting generating capacity in order to keep pace with Florida's growth, while at the same time achieving any significant reduction in GHG emissions such as CO_2. As discussed by several FPL witnesses in this proceeding, including Messrs. Silva, Sim, and Reed, nuclear generation is the single most important resource option in achieving these two objectives in parallel.

Governor Crist and his administration have acknowledged the significant role of nuclear power in Florida's energy future. In discussing renewable energy at the July 2007 Summit on Global Climate Change in Miami, Governor Crist identified solar, wind, and nuclear power as resource options that he believes should be part of an overall program to achieve meaningful GHG reductions. Specifically, with respect to nuclear power, he stated, "I think it's just as important....It's clean, it produces a lot of juice." *Crist's Nuclear Bolt Sends Flutters*, St. Petersburg Times, July 15, 2007, at 1A. Mike Sole, Secretary of Florida's Department of Environmental Protection, has reiterated the governor's position on nuclear

power, stating: "Nuclear is without question a great solution to powering Florida without creating greenhouse gas emissions." Id. More recently, Mr. Sole was quoted as saying "Nuclear is a fantastic fuel source to reduce air emissions." *Florida must overcome obstacles on way to a cleaner, greener future*, South Florida Sun-Sentinel, September 30, 2007, at p.1 of the South Florida Local Section.

Q. Does FPL support policy makers' objectives for fuel diversity as well as the Governor's desire to reduce GHG emission reductions?

A. Yes. FPL fully supports the Governor and policy makers in Florida with respect to their desire for fuel diversity and to reduce GHG emissions. Further, as I indicated, and as explained by other witnesses, FPL also agrees that nuclear generation is absolutely essential as a resource option if any meaningful reductions in GHG emissions are to be achieved. Approval of FPL's petition is an important first step toward achieving these objectives.

Q. Does nuclear generation provide an advantage over fossil-fueled generation from the standpoint of the industry moving towards a "carbon-constrained" environment?

A. Yes. As FPL witness Kosky notes in his testimony, in the U.S. to date there has not yet been a cost formally assigned in the market or through regulation for emission of CO_2. Various forms of legislation have been proposed before Congress which would have the effect of pricing carbon emissions for at least portions of the economy, including power generation. Effectively, to the extent the costs of CO_2 and other GHG emissions are explicitly required to be factored

into resource planning decisions, and as other fossil-fuel generation options begin to bear those costs, nuclear generation will compare more favorably to those other generation options. Thus, while the extent of CO_2 costs and the influence on natural gas price is unknown, the costs associated with any regulation of CO_2 emissions and the resulting increase in natural gas costs improve the relative economics of Turkey Point 6 & 7.

Q. Have other states indicated strong support for the development of new nuclear generation?

A. Yes. A number of states have expressed their support for nuclear power and the construction of nuclear power plants. This support is broad based. States, such as South Carolina, South Dakota, and Louisiana have publicly supported nuclear generation through passing resolutions that call for additional research, development, and construction of nuclear power plants. Additionally, the Kansas House of Representatives has passed a bill approving property tax exemptions as an incentive to encourage construction or expansion of nuclear generating facilities. Calvert County, Maryland has authorized property tax credit incentives for Constellation Generation group to encourage the construction of a new nuclear reactor. The Georgia State Senate is urging electric utilities to consider building new nuclear power plants in Georgia because they "produce electricity at a stable price at high levels of safety and reliability, while emitting no greenhouse or acid rain gases." More recently, the North Carolina Public Service Commission concluded that it was appropriate for Duke Power Company (Duke) to incur up to $125 million in pursuing preliminary siting, design and licensing of a proposed

nuclear station to ensure that nuclear generation remains an available resource option for Duke's customers. I expect we will see many more such initiatives around the country as the need and competition for new nuclear plants becomes more pronounced.

Q. Is Florida's public policy in support of new nuclear consistent with public policy on the federal level?

A. Yes. As FPL witness Scroggs indicates in his testimony, the Federal Energy Policy Act of 2005 provided strong signals of increasing national support for the development of new nuclear generation as an important resource option and necessary part of planning for the country's energy future. More recently, the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) expanded cooperation for President Bush's Global Nuclear Energy Partnership (GNEP) through a Memorandum of Understanding to increase cooperation between the two agencies on nuclear engineering studies and technological research. GNEP's mandate is to expand the use of clean, affordable nuclear power to meet the growing worldwide demand for energy.

Q. In addition to public policy support on both the state and federal levels, is there strong public support for the construction of new nuclear generation?

A. Yes. Public support is aligned with governmental support at all levels. Rasmussen Reports, an independent public opinion polling firm, conducted a survey in September 2006 and determined that, given a choice, "55% prefers building new nuclear power plants rather than relying on oil from the Middle East. Only 14% would reject the nuclear plants and opt to continue foreign oil

dependency." This survey also found that 73% of Americans indicate that it is "very important" that the United States become less dependent on oil imports.

Fully 81% of the public believe that nuclear energy will play an important role in meeting future electricity needs, according to a survey conducted in September 2006 for the Nuclear Energy Institute by Bisconti Research, Inc. In fact, three out of four people surveyed (76%) agree that electric utilities should prepare now so that new nuclear power plants could be built if needed in the next decade, and 63% favor definitely building new nuclear power plants in the future. Finally, 68% of the general public favors "the use of nuclear energy as one of the ways to provide electricity in the United States." Those in favor outnumber those opposed by 2.5 to 1. In the same survey, Bisconti Research, Inc. found that "[n]early seven in 10 Americans would support building a new reactor at existing nuclear power plant sites." A similar survey conducted in July – August 2007 by Bisconti Research, Inc. found that 71% of the persons living within a 10 mile radius of a nuclear power plant site said that it would be acceptable to add a new reactor at the site of the nearest nuclear plant.

These survey results indicate very strong public support for new nuclear generation in this country.

Q. Please describe some of the challenges FPL faces in planning for and constructing new generation in the state of Florida.

A. Florida, one of the most populous states in the nation, also continues to be one of the fastest growing. Over the past decade, FPL added an average of about 86,000 new customers each year. FPL is projecting an annual average increase of approximately 85,000 new customers for the next fourteen years. In addition, electric usage per FPL customer has increased by approximately 30% over the past 20 years. As FPL witness Green explains in his testimony, FPL also projects continued significant growth in energy usage per customer over the next decade. Despite administering one of the most successful energy conservation programs in the country, and a focus on developing renewable energy, this growth in demand for electricity has necessitated and will continue to necessitate that, on average, FPL build one large (i.e., 650 MW) power plant, or purchase an equivalent amount of power every year, along with constructing the transmission and distribution infrastructure needed to deliver the power to customers. This effort requires a massive commitment of financial and other resources.

Additionally, siting electric infrastructure is a continuing challenge. Very early on in our planning and siting process FPL makes considerable effort to listen to the concerns of members of the community regarding the location of electric infrastructure and explore alternative locations. Siting new plants is a complex process involving the study of a significant amount of information and selecting the site that, all things considered, makes the most sense for FPL customers.

Working through this process is very difficult, especially in such a high growth environment as Florida, with development occurring throughout much of the state and with fewer and fewer sites and corridors from which to serve that growth.

Similarly, many people continue to have concerns about the impact of power plant emissions, despite the fact that FPL has invested billions of dollars in clean sources of energy such as natural gas and in power plant emissions control equipment, resulting in emissions rates of CO_2, NO_x and SO_2 that are among the lowest in the electric utility industry.

Florida, of course, has no available native fossil fuel resources for the production of electricity, which further exacerbates the challenges described above, because it necessitates the development or expansion of fuel delivery systems into the state.

I know of no utility in the country that must plan for the rate and scale of growth we have in Florida under such challenging circumstances.

Q. Have these factors affected FPL's fuel mix?

A. Yes. As indicated by FPL witness Silva, in 2006 FPL's fuel mix was as follows: natural gas (50%); nuclear (21%); coal (18%); fuel oil (9%); and other sources (2%). Proportionately, the two largest contributors in FPL's generating fleet are natural gas and nuclear generation. For several years, natural gas has been the fuel of choice for both peak and new base load power generation projects in the

U.S. The fuel itself is clean and has been readily available; the power generation technology is well understood, proven reliable and thermodynamically efficient; and the typical combined cycle plant has relatively short development and construction times, allowing for flexibility in planning and the ability to meet changing demand forecasts. Thus, for many years, highly efficient natural gas-fired combined cycle plants dominated all others in economic comparisons. Nuclear power, a safe, emission-free source of electric power with low operating costs, also has been an important part of FPL's fuel mix, today accounting for about one-fifth of the power FPL generates. But that percentage will continue to decline without the addition of new nuclear generation.

Q. Please describe the need for fuel diversity, particularly as it relates to FPL's fuel mix.

A. Until fairly recently, natural gas was a relatively inexpensive fuel. Unfortunately, the relative price of natural gas has increased significantly over the last several years, and, as FPL witness. Yupp indicates, the fundamentals of supply and demand suggest that it is likely to increase further and that price volatility will continue to be a strong characteristic of this market. More specifically, FPL witnesses Yupp and Silva will testify:

- In light of the Commission's decision regarding the FPL Glades Power Park project, by 2021, the proportion of natural gas-fired produced electricity could be as high as 75% of total electricity delivered to FPL's customers, while the contribution of nuclear could decrease to 16%. (Silva)

- Natural gas is currently delivered into Florida from the U.S. Gulf Coast on-shore and off-shore regions via the Florida Gas Transmission (FGT) and Gulfstream Natural Gas System (Gulfstream) pipelines and from the regasification of imported liquefied natural gas (LNG) at the Elba Island, Georgia terminal via the Cypress pipeline. While the FGT and Gulfstream infrastructure has provided a high level of reliability over the years, the demands on both pipelines have continued to grow. FGT is currently fully subscribed and by mid-2009 Gulfstream will be fully subscribed. Even with the planned expansions of the Cypress pipeline, the addition of incremental natural gas-fired generation will likely require an expansion of the gas transportation infrastructure in the state. (Yupp)
- Expansion of the existing pipelines to meet additional demand will not help reduce the vulnerability to production curtailments due to natural disasters such as hurricanes. (Yupp)
- As more natural gas-fueled generation is added, the need to consider alternatives to maintain reliability of the gas supply will become imperative. These alternatives could include the addition of a new interstate pipeline, additional underground natural gas storage, on-site LNG storage facilities, and identifying alternate supply sources, including access to new producing regions as well as the addition of LNG. LNG imports are projected to increase to meet U.S. natural gas demand growth from approximately 1.6 billion cubic feet (BCF) per day in 2006 to approximately 14.3 BCF per day by 2020. By 2020, as demand for natural gas grows, it is projected that LNG

will account for approximately 20% of the total U.S. natural gas supply. However, it is important to note that to the extent LNG supply imported from the oil producing regions of the middle east or other volatile regions becomes a greater percentage of total U.S. natural gas supply in the future, the risks associated with foreign supply fuel sources will become more prevalent in the overall U.S. natural gas picture. (Yupp)

- Although it is impossible to predict future fuel prices with certainty, based on current fuel price forecasts the exclusive addition of natural gas-fueled generation in the future would likely result in more volatile and higher fuel costs over time. (Yupp, Silva)

Q. How will Turkey Point 6 & 7 help with fuel diversity?

A. Nuclear power is an important part of a fuel-diverse resource mix. This is particularly evident if coal-fired generation is not viewed as an acceptable resource option at this time in the state of Florida, because nuclear power is the only potentially viable solid-fuel option to natural gas-fired units. As FPL witnesses Yupp and Silva testify, Turkey Point 6 & 7 can play an important role in reducing FPL's and its customers' exposure to natural gas price volatility and to potential interruptions in the availability of natural gas supply, which might otherwise lead to temporary power curtailments.

Q. FPL has indicated its public support for various efforts to address climate change and curb GHG emissions. Are these actions consistent with FPL's proposal to construct Turkey Point 6 & 7?

A. Yes. FPL's central view on this matter is that it is time for this nation to move forward with a mandatory, economy-wide, market-based GHG emission reduction program. At FPL, we have built a generation portfolio that includes substantial amounts of low and non-GHG emitting generation. In fact, FPL and its parent company, FPL Group, Inc., have been recognized as environmental leaders in the utility industry, with emissions rates for NO_x, SO_2 and CO_2 among the lowest of their peer companies nationwide. This places FPL in a better position to face stricter environmental requirements. New nuclear generation is simply an extension of this philosophy. As I noted above, nuclear power will be a necessary part of any plan that seeks to reduce GHG emissions.

Q. Please discuss the importance of nuclear generation to the objective of reducing GHG emissions in Florida.

A. Clean energy will be an important part of Florida's and FPL's energy future, particularly with the prospect of significant regulation of GHG emissions, including potential CO_2 reduction requirements. While some renewable generating sources have zero emissions, others do not. And, as noted by FPL witness Reed and others, none of the renewable resources available today or in the foreseeable future can be considered to provide baseload capacity on a sufficiently large scale to avoid the need that would be met by Turkey Point 6 & 7. Indeed, nuclear energy is the only baseload generation technology available in Florida with zero GHG emissions. As shown by FPL witnesses Kosky and Sim, the addition of Turkey Point 6 & 7 will reduce FPL's already low CO_2 emissions by about 7 million tons (10%) as compared to adding combined cycle units, and

by about 17.5 million tons (21%) as compared to adding integrated gasification combined cycle (IGCC) units. Therefore, as FPL and other utilities across this high growth state face the need to add baseload generating units to meet customers' needs, nuclear energy in general, and the addition of Turkey Point 6 & 7 in particular, will be essential if meaningful reductions in CO_2 or other GHG emissions are to be achieved.

Q. Please summarize FPL's position on renewable energy sources, its experience in serving customers with renewable energy and the Company's current efforts to procure and develop new renewable sources.

A. FPL supports serving customers with energy from renewable resources to the maximum extent feasible. FPL began serving customers with renewable energy in 1980. Today, FPL purchases more than 300 MW of power from renewable resources yearly and has asked for proposals to add more. In addition to serving customers with purchased renewable energy, FPL is actively working on developing wind, solar and other renewable energy sources in the state of Florida. FPL witness McBee discusses FPL's efforts in greater detail, including the Company's recent announcement of a major solar energy initiative in Florida which is expected to result in installation of up to 300 MW of solar thermal generation capacity at one of its existing power plant sites.

Also, as discussed in more detail by FPL witness Silva, during 2007, FPL conducted a renewable energy request for proposals that contained flexible terms and no restriction on price or quantity. The request attracted national interest

from potential bidders. As a result, FPL received proposals from five bidders totaling 144 MW of firm capacity, plus a proposal for supply of 100 MW of non-firm capacity from technology under development based on harnessing ocean current energy. FPL is working to add these newly proposed renewable resources to the portfolio serving FPL's customers.

Q. Does FPL's support for the expansion of its nuclear generating capacity displace its support for the development of new and improved sources of renewable generation?

A. No. As FPL witnesses Silva, Sim and Reed indicate, there is ample room within FPL's supply portfolio for all of the viable renewable energy ideas that can be brought forward to meet the growing needs of our customers. But these resources will not displace the need for a large addition of baseload capacity in the referenced time frame.

Q. Please briefly summarize FPL's record of nuclear operations in the state of Florida.

A. As FPL witness Stall discusses more extensively in his testimony, the performance of FPL's nuclear operations has been excellent, ranking among the best in the United States in both safety and reliability. All four of the Company's units have received license extensions from the NRC. In short, we have the capabilities and expertise to operate new nuclear units that will produce significant benefits for our customers.

Q. What are some of the benefits to FPL customers that have resulted from FPL's nuclear units?

A. FPL customers have derived significant benefits as a result of FPL's effective operations of its nuclear units. As FPL witness Silva indicates, power from the nuclear units have the lowest energy cost on FPL's system. This means that whenever nuclear energy is available to serve customers, it displaces more expensive fossil fuels energy costs and air emissions. The high availability rate of FPL's nuclear units means that they represent a substantial percentage of baseload capacity in FPL's system. In fact, as FPL witness Yupp testifies, over the period from January 2000 through July 2007, FPL's nuclear units have saved customers $8.7 billion in fuel costs compared to natural gas and oil. Additionally, FPL's total system fuel costs experienced less volatility as a result of a portion of these total system fuel costs coming from stable, low-cost nuclear generation.

Q. What tangible environmental benefits has FPL's use of nuclear generation produced?

A. As a "non-emitting" technology, nuclear generation on FPL's system has avoided large quantities of emissions over the years. In fact, as shown by FPL witness Kosky in his testimony, FPL's nuclear units in 2006 have avoided 20,400 tons of NO_x, 20,100 tons of SO_2 and 15,282,100 tons of CO_2 compared to what otherwise would have been emitted using fossil fuels, an overall air emissions reduction of about 30%.

Q. You referred earlier to significant challenges in constructing a nuclear power plant. Please elaborate on those challenges.

A. Although FPL strongly recommends moving forward with this Project to add nuclear generation in the 2018 – 2020 time frame, it is imperative that the Commission and all constituents in this process understand that this endeavor will be an enormous undertaking, with significant hurdles and challenges, some of which cannot even be anticipated at this time. Such risks will reside in almost every aspect of this Project, including licensing, contracting and procurement, labor, construction, financing, as well as in the economic factors that underlie the actual decision to proceed. Such economic factors, as described by FPL witnesses Silva, Sim, Yupp and Kosky, include fuel costs, the cost of alternative forms of generation, and GHG regulation.

In this regard, we, and certainly our investors, are mindful of the challenges and experiences of the last round of nuclear construction in this country, largely driven by the regulatory and industry response to Three Mile Island, the legacy of which is monumental. It is noteworthy that at the time of Three Mile Island, 116 units were under construction. Sixty-six of those units were subsequently cancelled. The other 50 were completed but with an average delay of 6.3 years. Most significantly, no new plants have been ordered since 1978.

FPL witness Reed discusses the electric utility industry and, in particular, the regulatory experience at some length in his testimony. In addition to what Mr.

Reed describes, I will note two specific aspects of that experience as it relates to the cost increases that were experienced almost universally across the industry as utilities completed the construction of nuclear units. First, in the post-Three Mile Island world, companies were required to make significant design changes deemed necessary by the NRC and other regulatory bodies. These imposed significant incremental costs and delays on projects. Further, utilities faced much higher than anticipated escalation charges due to unexpectedly higher rates of inflation and cost of capital as well as to the extended construction schedules.

Also, while there is strong public and governmental support for moving forward with developing a new generation of nuclear units, at the same time, developing a new generation of nuclear units will almost certainly engender substantial, intense opposition from various quarters that remain resolutely opposed to nuclear power, regardless of the significant GHG-reducing and fuel diversity benefits it offers. It is no secret that as a tactical matter opponents of nuclear generation are likely to seek to cause as many delays as possible in all aspects of the process, with the eventual goal that projects will be dropped, due to a loss of governmental, company and/or investor support. Such delays will result in uncertainty as to schedule, cost and other dimensions of developing new nuclear units. Unfortunately, litigation and litigation costs will be a part of the process and cost of constructing new nuclear generation.

In summary, the combination of significant Project risks, the industry and regulatory experiences during the last round of nuclear construction, and the almost certain and intense opposition to nuclear-powered generation that will be presented by certain groups in this country certainly are significant challenges for any utility considering whether to pursue the addition of new nuclear generation.

Q. Given all of the challenges, why does FPL recommend moving forward with the Project?

A. While it is important to recognize the challenges that the Project will face, I also want to underscore FPL's support for moving forward as a means to preserve the option to add nuclear generation in the 2018 – 2020 time frame, and to realize all of the associated benefits for customers. Based on everything that we know today, it is the best resource option to provide needed baseload generating capacity, improve fuel diversity, reduce Florida's dependence on fuel oil and natural gas, and contribute toward meaningful reductions in GHG emissions. Other FPL witnesses in this case, including Messrs. Scroggs, Diaz, Silva and Reed, address these issues in detail, but I have listed below a few key factors that allow FPL to recommend proceeding with the development of this Project at this time:

- Non emitting characteristic of nuclear generation as a baseload resource addition in a CO_2-constrained environment;
- FPL's economic evaluation of the cost-effectiveness of nuclear as a resource option;
- Improved NRC approval processes;

- General expectation that we will not see a confluence of the same kinds of factors that led to the extreme cost increases in during the last round of nuclear construction;
- Step-wise approach that will permit annual reviews of the projected costs and system economics for such a plant pursuant to the Nuclear Power Plant Cost Recovery Rule;
- General support of political leadership;
- Initial indications through legislation and administrative rulemaking of governmental and regulatory support for the expansion of nuclear generating capacity; and
- Expectations that the Nuclear Power Plant Cost Recovery Rule will be applied appropriately.

The failure of any one of these factors at any time during the process could significantly shift the perspective of FPL and its investors regarding the merits of proceeding with the Project. Frankly, active and consistent governmental and regulatory support will be imperative to maintain the course of the Project and to help bridge any challenges that undoubtedly will arise along the way. Of course, the Commission itself also will have the right to review and revisit the viability of the Project on an annual basis through the annual review process instituted under the Nuclear Power Plant Cost Recovery Rule.

Q. What governmental and regulatory support will be required for this project to be completed?

A. Any utility that undertakes to construct new nuclear generating facilities will require active and ongoing regulatory and other governmental support for such a project. FPL witness Reed addresses this is some detail in his testimony.

A fundamental consideration underlying this and many other regulatory matters that will be heard by the Commission over the next few years is that the cost to provide electric service is increasing. We are living in a world with (i) increasing energy demands compared to relatively static pools of fossil fuel resources -- resources that are not natively available in the state of Florida; (ii) increased competition for labor, major equipment, and all of the other parts and raw materials that are needed to construct generating units; and (iii) a heightened concern and focus regarding the prospect of global warming and the need for reductions in CO_2 and other GHG emissions leading to, among other things, the introduction of more high cost renewable resources into the energy production mix. Of course, any one of these factors alone puts upward pressure on the cost of electric service. But these are the realities we face at the same time we at FPL must continue to build the necessary infrastructure to meet the growing demands for electricity in the state of Florida, whose population and economy are expanding at levels well above the national average.

Taking steps now to preserve the option of nuclear generation as a potentially important resource addition for FPL's customers and Florida's energy future will entail significant risks and will involve substantial costs. Therefore, to the extent that utilities and their investors are willing to make such large investments in these resource options, it is predicated only upon the expectation that government in general, and regulators in particular, recognize current market imperatives, and the reality of price increases for utilities to continue to provide adequate electric power to meet the needs of a growing economy while also achieving significant reductions in GHG emissions. It will be very important during this process that government and regulators begin to educate customers regarding the price increases that will be required to support important resource options, including both nuclear and renewables, necessary to secure Florida's energy future. It will be equally important that we are able to work collaboratively with the Commission and other stakeholders to realize the benefits available through the addition of new nuclear generation.

As a general proposition, if utilities and investors perceive any abnormal or unexpected regulatory risk associated with these significant, long-lived investments, such as a regulator failing to apply or otherwise misapplying the concept of prudence, including the use of hindsight in assessing decisions, misinterpreting cost recovery rules, or if the process becomes overly adversarial in nature, few if any nuclear projects will be completed. This would result in a loss of the associated benefits of fuel diversity, lower system reliability, and

higher CO_2 and other GHG emissions. The investment and the associated risk simply will be perceived by utilities and their investors as too great to warrant moving forward. If the Commission has any reasonable doubts about the wisdom of proceeding with the Project as proposed, taking into account the risks and costs involved, it would be far preferable to have that communicated now and for the Commission to deny the request for a determination of need. While such a result is contrary to FPL's recommendation, I feel obliged to make this point in order to clearly underscore the importance of governmental and regulatory support on a project of this size and complexity.

Q. Should the Commission grant FPL's request for a determination of need for Turkey Point 6 & 7?

A. Yes. Granting the determination of need under the provisions of Section 403.519, F.S., and Rule 25-22.081, F.A.C., applicable to new nuclear plants will represent the first, crucial step in a process that will maintain the possibility of new nuclear capacity being added to the FPL generating fleet starting in 2018. FPL will retain substantial flexibility to adjust the actual development and construction path in light of additional information likely to be learned in future years; further, the Commission will retain the ability to review and evaluate future decisions contemporaneously, thus ensuring that the final result is prudent and in customers' long-term best interests.

While it is impossible for any single technological solution to be economically preferred in all situations, FPL's economic analysis shows a wide range of

scenarios in which the addition of new nuclear capacity will provide large direct economic benefits to customers, as well as maintaining fuel diversity and system reliability for our customers for the period beginning 2018, and achieving meaningful reductions in GHG emissions. The Commission should approve FPL's request for a determination of need and, in so doing, indicate its strong support for this Project.

Q. Are you asking for the Commission to do more than simply grant a determination of need in this case?

A. Yes. If the Commission decides to grant a determination of need in this case, FPL is requesting that the order reflect strong support for the Project, affirming the importance of taking steps now to preserve nuclear as a resource option to meet needs as early as 2018, acknowledging the risks and costs associated with a project of such magnitude, and clearly indicating the importance of, and Commission's intent to provide, continued regulatory support throughout the process. In this regard, FPL also has explicitly requested that the Commission confirm the appropriateness of FPL incurring obligations and making advance payments for long-lead procurement items that are reasonably necessary to preserve the earliest practical deployment schedule for the Project. Further, we are asking that the Commission confirm that such payments are properly characterized as "pre-construction costs," to be recovered pursuant to the Nuclear Power Plant Cost Recovery Rule.

Q. Does this conclude your direct testimony?

A. Yes.

BY MR. LITCHFIELD:

Q Mr. Olivera, have you prepared a summary of your testimony today?

A I have.

Q Would you provide that to the Commission?

A I will; thank you.

Chairman Carter, Commissioners, thank you for the opportunity to address you today. Our projections by the year 2020 show an overall system demand for electricity that it will grow by about 40 percent, and that equates to more than 8,000 megawatts. We will meet that need with a combination of fossil generation, renewable energy, conservation, and load control programs. And subject to your approval, nuclear generation up to a little bit over 3,000 megawatts of new nuclear generation.

There are several reasons why nuclear is the right option for our customers and for our state. It reduces our emissions rate significantly, and it is an integral part of our strategy to reduce greenhouse gases. It provides badly needed fuel diversity in a system that is already more than 50 percent dependent on natural gas. Today we only have two options for base load capacity; more combined cycle natural gas plants or new nuclear plants. And of the two, only nuclear will help us mitigate the price volatility of natural gas. It will also enhance our overall system reliability by not increasing our

dependency on the two natural gas pipelines that come into the state.

Nuclear will also reduce our country's dependence on fuel sources from the Middle East and other volatile regions in the world. I want to reassure this Commission that pursuing this strategy does not, in any way, detract from our focus from developing more renewable technologies and aggressively pursuing energy conservation and load management programs. These will all be a significant and growing part of our energy mix in the future. But these efforts are not enough to meet all of our customers' needs, so we also need to pursue nuclear generation.

The strategy does have greater risks than any other proposal that we have brought to this Commission in recent times. There are significant hurdles and challenges in almost every aspect of project development and construction, but we will have an opportunity to review annually with you the projected cost and system economics, an approach that you developed pursuant to the nuclear power plant cost-recovery rule, and one that has given us much comfort in moving ahead with this project.

Given all the uncertainty that we face in developing and constructing this plant, we are asking not just for your approval for need determination, but your acknowledgment that we are taking the right steps, that there are significant risks

and costs associated with a project of such magnitude, and your intention to provide --

CHAIRMAN CARTER: One moment, please. We're having some technical difficulties.

(Off the record.)

THE WITNESS: Continue?

CHAIRMAN CARTER: Yes, sir.

THE WITNESS: I'll just -- you know, given all the uncertainty that we face in developing and constructing this plant, we are asking --

CHAIRMAN CARTER: Excuse me. Just kind of for the flow, you said there were two options, two things that you were asking the Commission, would you just start there. One was the approval of the -- does that help you with your train of thought?

THE WITNESS: It's not a problem. This is when I started to talk about --

CHAIRMAN CARTER: What you are asking the Commission for. You said one was approval of this.

THE WITNESS: Yes. We're asking not just for approval for the need determination, but really your acknowledgment that we are taking the right steps, that there are significant risks and costs associated with a project of this magnitude, and your intent to provide continued regulatory support for what is likely to be a ten-year effort. In effect,

we are asking you for your explicit and unwavering support in granting a determination of need for this project.

So, based on everything we know today, this is the only best option that we have that contributes meaningful reductions in greenhouse gas emissions. It provides needed base load capacity. It improves fuel diversity, and it reduces Florida's dependence on natural gas and oil fuel. The granting of this determination will allow us to pursue nuclear as an important resource option to best position FPL to continue to provide the citizens of the state safe, reliable, and reasonably priced electricity. And that concludes my remarks.

CHAIRMAN CARTER: Thank you. Sorry about the technical difficulties. These things happen.

Mr. Litchfield.

MR. LITCHFIELD: Mr. Olivera is available for cross-examination.

CHAIRMAN CARTER: Okay. Mr. Beck.

MR. BECK: I have no questions. Thank you.

CHAIRMAN CARTER: Mr. Krasowski or Mrs. Krasowski.

MRS. KRASOWSKI: Yes. Jan Krasowski.

CROSS EXAMINATION

BY MRS. KRASOWSKI:

Q Good afternoon, Mr. Olivera.

A Good afternoon.

Q I have a few questions and bear with me. This is the

first time I have ever cross-examined a witness.

CHAIRMAN CARTER: Excuse me. Could you just bring your mike a little bit closer to you?

MRS. KRASOWSKI: Sure.

CHAIRMAN CARTER: There we go, that's much better.

MRS. KRASOWSKI: Thank you.

BY MRS. KRASOWSKI:

Q On Page 2, Line 19 of your testimony, what are your claims of firm capacity need based upon?

A They are based on our forecast of demand. And Mr. Silva, who will follow me as a witness, will be able to go into a lot of detail about how that forecast is derived.

Q What is the date of the forecast? Like, when was the forecast made?

A I can't give you an exact date off the top of my head. I believe the forecast we filed in -- it would be probably early '07, but I can't give you with certainty. And I would defer the specific date to Mr. Silva.

Q Thank you. On Page 3, Lines 1 through 7, do you have an update on the megawatt size of the plant that you are proposing?

A The size of the megawatts that we are proposing will ultimately depend on the technology that is chosen. And I believe we've talked about the Westinghouse technology which is roughly 1,100 megawatts per unit versus GE technology, and

there are two sizes for that. So that is when we talk about in the filing the size of the units, we really bracket it with the two technologies that we have been looking at very closely.

Q So you have not come to a decision on which kind of plant you are going to be using?

A We have not made a decision with regards to the specific design that we are going to be using which affects the size of the unit.

Q Okay. Let's see just a minute. Let me back up here.

It is my understanding that in -- is that Issue 9? In one of the issues, Issue 7, FPL is requesting that preconstruction costs -- no? Excuse me. Sorry.

Issue 10, now. Sorry. That preconstruction costs be permitted to buy two vessels, or be permitted to get in the queue to buy two vessels in Japan to be used in the nuclear power plant, and that they were for a Westinghouse --

CHAIRMAN CARTER: I think that's Issue 5.

MRS. KRASOWSKI: Thank you very much.

CHAIRMAN CARTER: No problem. No, Issue 9.

MRS. KRASOWSKI: Issue 9. I was right to begin with.

BY MRS. KRASOWSKI:

Q That they are asking for preconstruction costs to be collected for two vessels that would be used in a Westinghouse 1,001 megawatt plant in the AP 1000?

MR. LITCHFIELD: Mr. Chairman, may I ask that the

witness be allowed to read the statement of Issue 9 before he answers the question?

CHAIRMAN CARTER: That will be fine. Do you have a copy?

MR. LITCHFIELD: I do.

CHAIRMAN CARTER: Okay. Just one moment.

THE WITNESS: I have a copy. Issue 9. I haven't read it, but I have a copy.

CHAIRMAN CARTER: Okay. Do you feel comfortable answering the question? Or, Mrs. Krasowski, had you finished your question?

BY MRS. KRASOWSKI:

Q Well, my question was, I guess, have you seen Issue 9?

A I'm familiar with the issue, yes. But I can't always correlate the number to the issue off the top of my head. It happens after 50.

Q But, as you said before, is it true that you have not made a decision on what kind of design plant you were going to use?

A We have not made a final decision with regard to the technology.

Q Thank you. Okay. Thank you.

All right. On Page 5, Lines 17 through 18, where you say that, likewise, this Commission, which is the PSC, has

encouraged the development of nuclear generation adopting the nuclear power plant cost-recovery rule.

Was this adoption of the NPPCR rule required by Florida Statutes?

A I'm sorry, could you repeat your question?

Q Okay. Was the adoption of the Nuclear Power Plant Cost-Recovery rule required by Florida Statutes; was it required that the PSC adopt those?

A I'm sorry, I'm having trouble with your question.

CHAIRMAN CARTER: Let me see if I can help out.

MRS. KRASOWSKI: I'll rephrase.

CHAIRMAN CARTER: Okay. Good.

BY MR. KRASOWSKI:

Q Page 6 at Line 5, where you state that the question was have Florida policymakers also recognized new nuclear power as an important element in the effort to reduce greenhouse emissions, particularly carbon dioxide? And you say, yes, Governor Charlie Crist recently signed Executive Order Number 07-127 targeting significant reductions in levels of greenhouse gases.

Does this executive order pertain to more than the departments under his control, do you know?

A I think you are asking me a legal question whether the order, if I interpret your question, is does the order -- I'm not sure, you are going to have to restate the question.

MRS. KRASOWSKI: Well, I'll drop that one for now, then.

BY MRS. KRASOWSKI:

Q On Page 7, Lines 9 through 14, how do you propose to reduce the carbon dioxide levels before the nuclear plant is on-line, if it is, indeed, built?

A Today, we have a very clean fleet. When you look at our emissions profile, we have one of the cleanest emission profiles of not just Florida, but anywhere in the United States. So how much action we have to take will depend on how the rules are drafted. If the rules recognize it has to be some percentage of where we are today, then that means we would have to reduce further, although I have often made the analogy that it is a little bit like going to the skinny person and asking them to lose, you know, 10 percent of their weight, as opposed to a fat person, meaning utilities that today have a lot of emissions. And for them to reduce their emissions by 10 percent it's a lot easier than a company like ours that is already very efficient.

So, first, it is premised on that. We have modeled internally some of the implications of the climate change orders, and we believe we can meet them largely by staying on course, the things we are already planning on doing. More energy efficiency, more conservation, greater use of renewables.

Our fleet has continued to get better in emissions through all the natural gas combined cycle plants that we have added. We added Turkey Point 5, we have West County 1 and 2 under construction, so we have had, really, for a long time a program that has been upgrading our fleet, and at the same time improving the efficiency of our plants.

So we feel good about the plan we have. I think the things that we have executed put us on a good glide path toward achieving those goals. And, certainly, the first goal whether it is 2017 or a 2020 goal relative to the 2000 levels, which is, I think, the specific part of the order that you are referring to, we think that those actions will get us very close to those targets.

Now, the wild card is going to be what happens in federal legislation. And, frankly, I think it's anybody's guess how that is going play out right now.

Q Thank you. That was going to be my next question.

On Page 10, Lines 14 through 17, you mention a Bisconti Research survey, and you said a survey conducted in July through August of 2007. Are you sure that that was conducted in July through August 2007? I have a U.S. Public Opinion on Nuclear Energy Bisconti Research that was published in October of 2007, and I'm wondering if it might be the same that you are speaking about?

A I don't know which one, specifically, you are

referring to, but the survey that I referenced in my testimony, it's entitled U.S. Public Opinion about Nuclear Energy, it is dated September 2006 by Bisconti Research, Incorporated. It was conducted for the Nuclear Energy Institute, and I would be happy to put this as an exhibit or share that with you if you would like.

Q On Page 10, on Line 14, it says a similar survey conducted in July through August 2007 by Bisconti Research, and then it goes on to say that 71 percent of persons -- and I won't finish reading that. But could we show you the Bisconti Research Public Opinion on Nuclear Energy 2007 that we have that was produced by Bisconti Research to see if that is, indeed, the survey?

CHAIRMAN CARTER: Do you plan on asking him questions about the survey?

MRS. KRASOWSKI: Yes.

CHAIRMAN CARTER: Okay. We'll have to be careful here. I mean, he is referring -- you're going to ask him whether or not he referred to it, and I don't have any information on that, but we'll just be careful, okay.

MRS. KRASOWSKI: Commissioner Carter --

CHAIRMAN CARTER: You can show it to him.

MRS. KRASOWSKI: First, we would just like to determine that this is the survey that he is talking about.

CHAIRMAN CARTER: One moment, and let his attorney

look at it, as well.

MR. LITCHFIELD: And, Commissioner Carter --

CHAIRMAN CARTER: Mr. Litchfield.

MR. LITCHFIELD: -- we have a copy of the survey that is referenced in his testimony.

CHAIRMAN CARTER: Why don't we do this, then. Why don't we just pull a copy of the survey that Mr. Olivera refers to in his testimony, and maybe that will kind of shorten the process, and then you will know exactly what he talked about. So, Mr. Litchfield, Mr. Butler, why don't we just do that? That will help the process move along a little smoother. Do you have more than one? Maybe we can have one for the witness and one for the Krasowskis, as well. Is it the same?

THE WITNESS: I'm sorry, I can't tell right off the top.

CHAIRMAN CARTER: Why don't you use the one that your lawyers gave you and that way you will have the one that you referred to. And then we can kind of move from there. And, Mr. Butler and Mr. Litchfield, do you have another copy that you can share with the Krasowskis of that report?

MR. LITCHFIELD: Well, I believe we may, because Mr. Olivera may already have a copy, in which case we would have two.

CHAIRMAN CARTER: Let's verify that. Let's just take a moment.

THE WITNESS: I apologize, Mr. Chairman, a lot of different surveys and a lot of data.

CHAIRMAN CARTER: Okay. Before she gets going again, let me ask you, Mr. Butler, is that the same document so we don't have to --

MR. BUTLER: The Krasowskis now have a copy of what Mr. Olivera referred to in his testimony. It doesn't look like that is the same thing that they handed out a minute ago, and that was kind of what we were trying to confirm.

CHAIRMAN CARTER: Mrs. Krasowski, the document that he refers to in his testimony is what they just provided you and you can ask him questions based upon that document.

MRS. KRASOWSKI: We are seeing if the questions match up, are the same.

(Pause.)

MRS. KRASOWSKI: All right. So, the survey which Mr. Olivera refers to is different than the recent survey that we have. So we won't ask any more questions on it.

CHAIRMAN CARTER: Okay. That's fine.

MRS. KRASOWSKI: Thank you.

BY MRS. KRASOWSKI:

Q On Page 13, and I believe it is Lines 7 through 8.

A I'm sorry, did you say 13?

Q Yes. Page 13, Lines 7 through 8. You state that nuclear power, a safe, emission free source of electric power

with low operating costs, also has been an important part of FPL's fuel mix. Mr. Olivera, when you say emission free source, can you explain that, what you mean by that?

A I am referring to nuclear power, because nuclear has zero emissions. So it has been an important part of our mix. Certainly our customers have benefited greatly from the lower variable costs associated with nuclear power.

Q Mr. Olivera, when you say nuclear power, are you also including the nuclear fuel cycle in that or are you just including the plant operations and what comes out of as far as greenhouse gases and CO2 that comes out of the plant?

A There are no greenhouse gases or carbon dioxide that is emitted by a nuclear plant.

Q Would you agree, though, that there is carbon dioxide and other greenhouse gases that are emitted in the nuclear fuel cycle which includes the milling, the mining, and enrichment of uranium that is used in the plant?

A I'm sure there are some emissions during part of that process, but it is a very small piece of the equation. I think all of us today driving here emitted some CO2, so whenever you have human beings involved in the process, I guarantee you you can make an argument that there is going to be some CO2 emitted.

Q Would you admit that during the nuclear fuel cycle, which does include the mining, milling, and enrichment of

uranium, that there are almost -- well, there are as much carbon dioxide and greenhouse gases emitted as in a small gas plant?

A I would not agree to that. I think I would want to see your analysis and data.

Q Okay. Another question on emission free source. What other kinds of emissions, not counting greenhouse gases and carbon dioxide, which is a greenhouse gas, are emitted in the operation of a nuclear power plant?

A I think I believe that I said earlier that when a nuclear plant is in operation there are virtually no greenhouse gases emitted. It is a zero emissions environment.

Q When I am asking this question, I'm not asking about greenhouse gases. Now I am asking about the fission gases and the nuclides and other things that are released in a nuclear power plant in their emissions. Can you comment on those? Do you know what those are?

A When you say emissions, are you asking -- are you implying that these are emissions that are made into the environment?

Q Yes.

A They are almost negligible, and I am certainly not an expert on the nuclear chemical reaction, and I think we have witnesses that are far more qualified than I am to talk about that. Mr. Stall and Mr. Diaz. But there are virtually no

emissions that go into the atmosphere or the environment if that is the question, and I'm not completely clear if that is your question.

Q Well, in your statement on Page 13 on Line 7 you say that nuclear power, a safe, emission free source of electric power, and that is not the case. Okay. Well, I guess they call the emissions effluent in a nuclear power plant, is that correct? All right. Well, if you don't know exactly what is emitted from a nuclear power plant, then how can you say that it is emission free?

A I didn't say that I didn't know, I said that there were no greenhouse gas emissions coming out of a power plant. I believe that is what I said.

Q Yes, you did. Well, do you admit there are effluents, and fission gases, and activation gases, and iodines, and other gases, Nobel gases that are released from a nuclear power plant?

A I think I believe I said -- I think you are mixing what is going on inside the reactor with what is getting admitted into the environment, and I said that there is virtually nothing emitted into the environment. And I think some of the things that you are mentioning, and I am about to cross my level of knowledge in the nuclear chemical reaction, but some of the things you are mentioning are inside the containment and they are part of the nuclear chemical process

and not anything that gets emitted into the environment that affects people outside the plant.

Q Mr. Olivera, what is a ground level release, do you know?

A Conceptually, I do. It is basically when there is something that the plant for whatever reason gets into the ground.

Q Does it include the surface of the --

MR. LITCHFIELD: Mr. Chairman, may I impose an objection here?

CHAIRMAN CARTER: I'm going to sustain the objection.

Mrs. Krasowski, we have given you great latitude on this. Let's move on.

Sustained.

MRS. KRASOWSKI: May I submit this to Mr. Olivera? It is from the Nuclear Regulatory Commission.

CHAIRMAN CARTER: No, ma'am. You will have to go through a process, and his attorney is entitled to make objections. And the document that we gave you leeway on is the document that Mr. Olivera himself referred to. You can use that, but extraneous -- and I think that there are some other experts here that are on the process that you can talk about that. And not to insult Mr. Olivera's intelligence or anything like that, but there are some people here in engineering.

THE WITNESS: And I am certainly far from a nuclear

expert. And I think you will have a great opportunity with Doctor Diaz in particular, who has been the Chairman of the Nuclear Regulatory Commission, who is one of the expert witnesses that will be coming on later either today or tomorrow.

MRS. KRASOWSKI: Thank you. I respect your knowledge.

BY MRS. KRASOWSKI:

Q I have one more question about Lines 7 and 8, and that is the low operating cost of a nuclear power plant. Does that include the waste storage and the waste that, spent waste that comes from the plant?

A It includes all the variable costs associated with the plant. So, when we talk about a low operating cost, it is really the fuel and the cost of operating that plant.

Q What is the life-cycle of the management of the spent fuel that is included in the cost of maintenance and operation?

A I'm not sure what you mean by the life-cycle cost of the fuel. You are talking about from the mine, from the time it gets mined until it is spent fuel?

Q No. Actually I am talking about when it is spent fuel and when it needs to be stored and then restored in casks and things like that.

MR. LITCHFIELD: Again, Mr. Chairman, I'm sure Mr. Olivera can answer many of these questions at a high level, but

we do have witnesses whose will follow Mr. Olivera who would be absolutely able to address the questions at the level of detail that Mrs. Krasowski apparently wants to explore.

MRS. KRASOWSKI: Good enough. Thank you.

CHAIRMAN CARTER: Let's do that. And, as I said, we gave you great latitude, but I do think that we have the experts here that can do that.

MRS. KRASOWSKI: All right. Thank you.

BY MRS. KRASOWSKI:

Q On Page 16, on Line 20, you say, "Indeed, nuclear energy is the only baseload generation technology available in Florida with zero greenhouse gas emissions." And perhaps right now it is. I have a question, though. Oh, okay. I have a question. Are you familiar with Ausra Solar Company?

A With who?

Q Ausra, A-U-S-R-A.

A It is Ausra. Yes, I am generally familiar with Ausra.

Q And Solel, which is an Israeli company?

A I'm not as familiar with them.

Q Yes. I read that FPL Incorporated has some contracts with them out in California. Have you seen their abstracts about baseload solar thermal capabilities that they are planning on bringing on-line in like three to five years?

A I am familiar with the Ausra technology. It is one

of the parties that we have been under discussion with to bring solar into the state of Florida, and I believe we have stated publicly that our goal is to have a ten megawatt demonstration project that will be based on the Ausra technology, although we have not been able to agree to commercial terms with Ausra. But there has been active discussion with them for sometime, and we have also stated publicly that our goal would be if we are successful with that or a competing technology to increase that up to a 300-megawatt facility.

Q What is your understanding of Ausra's ability to provide baseload solar thermal energy through steam storage?

A I'm not a technology expert, but I will tell you that conceptually it is almost very difficult to talk about it without getting into a discussion about the technology and how it works. We are intrigued by the technology because it would augment effectively the generation of steam in a combined cycle plant. We are probably less optimistic about the storage technology associated with that. I don't know where you are going, but that is --

Q Well, I just want your opinion, basically. Okay, let's see.

On Page 20, on Lines 7 through 8, where you speak about -- you speak about significant challenges in constructing a nuclear power plant, and you say that there are some challenges. There are challenges, some of which cannot be

anticipated at this time. What would you consider something that cannot be anticipated?

A If I could anticipate it, it wouldn't be unanticipated, would it?

Q Okay. All right. Down further on the same page in Lines 16 and 17, would you consider Three Mile Island an unanticipated event?

A That is a good question for you to ask Mr. Diaz. I will give you because he is much more knowledgable about all the events around Three Mile Island, but I certainly would say that the nuclear industry at that point did not anticipate that event, but I'm sure that Doctor Diaz will have his own opinion.

Q Page 21, and that is basically Lines 10 through 21, you speak about public participation -- you speak about public participation and opponents of nuclear generation using tactical matters to seek to cause as many delays as possible in the process. Do you support public participation?

A I absolutely support public participation. You cannot build a nuclear plant unless you believe that you have sufficient political support and sufficient public support, which is why in my testimony I highlighted the Nuclear Energy Institute survey, because it shows that the majority of Americans support nuclear power. We would not be here today if we didn't believe that we enjoyed sufficient political and public support to go forward. No company can undertake a

project of this magnitude without feeling that they have this level of support. It would be crazy on our part.

Q In your testimony on Page 21, Line 15, like, what do you mean by tactical matter?

A Generally, I am referring when we talk about -- generally, I am referring to litigation. The biggest threat we face in this nuclear plant are delays, because when you kind of go through the numbers, what caused the great overruns after Three Mile Island were the huge delays. And you are sitting there with a construction loan and you are incurring a lot of interest costs, and a lot of rework costs, and that is what really signified or amplified the costs associated with these plants.

If you look at the economic analysis of our plant, it is over a billion dollars of interest costs, and so if the plant gets delayed by a few years, it grows exponentially. So one of the things that we are concerned when we look at a nuclear plant is where are the opportunities for the delays and how long are those delays. How long will it take to work through those kinds of issues. So any entity that wants to stop the development of a nuclear plant will try to go through a litigious route and file as many complaints and as many lawsuits as they can to slow the development of the plant.

Q Might not those complaints and concerns that would require litigation be appropriate in light of your previous

statement that there are challenges that cannot be anticipated in this?

A I think there is a time and a place for a full airing of all the complaints and all the concerns and all the issues associated with a nuclear plant, and I think we are going through that process today. And we welcome one and all to weigh in. It is really important. It affects all of our lives, and so as a company, we think the more robust the process the better off.

But once a decision is made by the appropriate bodies, by you, by the state and the cabinet, by the Nuclear Regulatory Commission, once all of those arguments have been made and decisions have been made, then I think it is important that we move forward and that the ability to litigate those plants has to be curtailed, severely curtailed, and the case only reopened up if there is really something completely unanticipated that goes on.

We support the dialogue. We think it is very important, and we think it is very important that people in Florida and the people in this country weigh in. But once the approvals are obtained, the decisions have been made based on all the evidence that has been put forward, we need to move on.

Q Well, thank you, Mr. Olivera. I appreciate that you want the public to participate and are interested in that. One more question. On Page 23, Lines 17 through 18, where you

say -- well, actually it starts on Line 15 here. Do you have it there?

A Yes.

Q "Frankly, active and consistent governmental and regulatory support will be imperative to maintain the course of the project and to help bridge any challenges that undoubtedly will arise along the way." When you say to help bridge any challenges, are you suggesting that governmental bodies give up their regulatory positions?

A No, I'm not suggesting that any regulatory body give up their legal charter or legal requirement. But I'm saying that once -- again, go back to my earlier comment, that once we have gone through the process, once the approvals have been obtained, then we shouldn't reopen those processes up again for what in the past in some cases has been fairly frivolous claims.

MRS. KRASOWSKI: Thank you very much.

THE WITNESS: Thank you.

CHAIRMAN CARTER: Thank you very kindly.

Before we come back to you, Mr. Litchfield, Staff, do you have any questions?

MS. BRUBAKER: Yes, please.

CHAIRMAN CARTER: You are recognized.

CROSS EXAMINATION

BY MS. BRUBAKER:

Q Hello, Mr. Olivera. I appreciate your indulgence. Just a few questions, if I may. Jennifer Brubaker for Legal staff.

Were you present this morning during the public testimony portion of the hearing?

A I heard part of it. I'm not sure if I heard it all.

Q Were you present when there was a comment made about Germany decommissioning its nuclear plants, or have you heard about it?

A Was this Commissioner Argenziano's question?

Q That is correct.

A Yes.

Q Do you have any knowledge about that statement and would you agree with that statement?

A I would disagree, and we have to get you a little more detail. What I have read about Germany is that they have -- the government has been at the very least suggesting that they do not decommission these plants because it is the only way that they are going to be able to meet the Kyoto Protocol greenhouse emission targets. And we are trying to research to make sure that -- and I have heard, I have read about Prime Minister Merkel saying that, you know, it is her desire to roll back and not decommission these plants. So, I think Mr. Scroggs is kind of making sure we can provide to you

sort of a definitive government position, but that is certainly what the political leadership in Germany has been saying. And I would also encourage you in addition to looking at -- which I think is a very fair question, that you also look at countries that have made a national policy of going nuclear. France is a great example where over 80 percent -- I mean, France has a policy of building essentially all nuclear plants. Over 80 percent of their energy needs are met with nuclear energy. It has been an incredibly successful program.

I would also encourage you to look at Japan. While we stopped building nuclear plants in this country, Japan continued to build nuclear plants. There are a series of example in Asia in particular where a number of the Asian countries, because they have fast growing economies, have also made a commitment to nuclear.

So, I frankly believe that if we are going to make significant -- on a worldwide basis, if we are going to make significant reductions in greenhouse gases, nuclear has to be part of the mix.

Q And, Mr. Olivera, you indicated that Witness Scroggs would also possibly be able to speak to that issue?

A Yes, I think he is. He is trying to research now to see if we can provide you with a specific German government position. I have given you sort of my recollection from reading about what the government leaders have said.

Q Now, early during Mrs. Krasowski's line of questioning you had mentioned that there is actually two designs that FPL is looking at with respect to the Turkey Point Units 6 & 7 project, correct?

A Basically, two. There are several designs out there. Basically, there are four designs out there, but in earnest we have been looking at two.

Q And FPL has not completed that selection process between those two designs, is that correct?

A That is correct, we have not.

Q Do you know when that selection process might take place?

A We would like to complete that process sometime this year. The issue in selection is not so much the technology that is the key. The key is also being able to get commercial terms that are sort of appropriate and really the best commercial terms that we can get for our customers and for the project. And at this time we are in heavy discussions with both entities trying to figure out how much of that price, for example, can be a fixed price and how much of it is going to be a variable price. And it is a very complicated negotiations process, and I think we want to keep talking to two entities until we feel that we have gotten to the point that we have the best commercial terms that we can get.

Q Am I correct that the Commission is scheduled to

render its decision in this need petition docket prior to FPL making that selection process finalized?

A Yes, I think that is a very reasonable assumption.

Q Is FPL requesting in this docket that the Commission indicate a preference or to select a design technology with regard to the need?

A I would request that the Commission not box us into a technology selection at this point. You will have an opportunity when we reach commercial terms to look at those terms and get comfortable with it. But we have the most leverage in negotiations right now if we are allowed to reserve a couple of options. This is the proverbial -- you know, if you are negotiating with two parties it is better than negotiating with one when you have to have a specific outcome. So we think we are better off right now to negotiate with two. We will have the best leverage in the negotiations if we take that path.

Q If the Commission were not to express a preference for one technology over another in this need determination, in what forum would the selection, the finalized selection be addressed?

A When we come in through the annual cost-recovery hearings, we would go through with you what the technology selection is and we would explain our rationale and go through the terms of that agreement. We almost certainly will have to

make that decision before we could file for the commercial operating license, so there is kind of a specific timeline that you are going to have to meet. And I think in that cost-recovery forum we could kind of lay out for you the technology and the rationale for the technology selection and the commercial terms that we feel are the best that we can get.

Q Now, the cost-recovery process you talked about, that process contemplates that FPL would seek recovery for those items which are found to be prudent in that process, correct?

A Correct.

Q And is it your belief that holding off on the selection process, finalizing the terms, the things you have described here, that the ultimate outcome would be a selection that is the most prudent?

A I believe that, and we would try to make sure that any contract that we entered would be really subject to your approval of prudency.

MS. BRUBAKER: Thank you. I have no other questions.

CHAIRMAN CARTER: Commissioner Edgar.

COMMISSIONER EDGAR: Thank you.

Mr. Olivera, on Page 3 of your prefiled testimony, this is a very general statement, but I will be glad to let you get there if you want. About halfway, roughly, down the page you make the statement that says in connection with this determination of need, FPL is also requesting Commission

confirmation that advanced payments would be reasonable. Do you see where I'm at? It's around Line 11, I'm sorry.

THE WITNESS: I'm sorry, what page?

COMMISSIONER EDGAR: Page 3 around Line 11.

THE WITNESS: Yes, I have it.

COMMISSIONER EDGAR: Okay. So my reading of that is that FPL is asking that certain advanced payments to be made in 2008 would be deemed as reasonable preconstruction costs. So my first question is are there other preconstruction costs that will be made in 2008 by FPL for this proposed project?

THE WITNESS: Not that we can anticipate today. I think that the reference that we have here is basically what I think of as a reservation fee for the castings, and that is driven by Japan Steelworks having a virtual monopoly with the vendor. You have to get Japan Steelworks to do the castings for these reactors, and you are basically being asked to pay a reservation fee and get a place in line.

COMMISSIONER EDGAR: And I don't mean to interrupt, I understand, but my question that I'm trying to get to is those are the only payments preconstruction -- and payments may not be the right word. The only costs, let me use that, costs that FPL will incur for this project in 2008?

THE WITNESS: We will also be occurring costs developing the project. We will be incurring costs as we gear up for the development of the application. And we estimate

that -- you know, we already have hired a fair amount of people, and ultimately we may have as many as 100 people working on the application. So there will be some costs that will be incurred as part of that process, but we are not asking for recovery of those today.

COMMISSIONER EDGAR: And my expectation would be that there would be costs, other costs. I mean, I would expect a variety of consultants and siting work and attorneys fees and a variety.

THE WITNESS: Yes. The need process and the COL are probably the two biggest cost drivers.

COMMISSIONER EDGAR: Okay. So those other costs, preconstruction costs that FPL will be incurring, do you believe that those would be fair and prudent management decisions in pursuit of the project?

THE WITNESS: I do.

COMMISSIONER EDGAR: But yet, as you stated, you are not asking for this Commission to make a determination of reasonableness?

THE WITNESS: Correct. We would come back to those in the next year's process.

COMMISSIONER EDGAR: If this Commission were to determine that the advance reserves, $16 million payments were to be reasonable, do you see that as being, then, also prudent?

THE WITNESS: Yes. I think I would ask you to also

weigh in on that that is a prudent decision for us to make. That making the reservation fee effectively, paying for that reservation and making that reservation fee is a prudent decision on our part in order to allow the project to stay in a reasonable timeline.

COMMISSIONER EDGAR: Thank you.

CHAIRMAN CARTER: Commissioners.

Commissioner Skop, you are recognized.

COMMISSIONER SKOP: Thank you, Mr. Chairman. Just a point of clarification.

With respect to preconstruction costs that I think Mr. Olivera's prefiled testimony may have been filed well in advance of the prehearing, but the issue came up with respect to a determination by the Commission with respect to things being properly characterized as preconstruction costs, and during the prehearing I excluded that issue. So the only remaining issue would be Issue 9 as stated in the docketed issues list currently. So, just as a point of information I wanted to mention that. Thank you.

COMMISSIONER EDGAR: Mr. Chairman.

CHAIRMAN CARTER: Commissioner Edgar.

COMMISSIONER EDGAR: Commissioner Skop, I am well aware of what is in the prehearing order, and I was asking Mr. Olivera as a witness as to his opinion. And I do not need you to clarify his testimony to answering my question for me.

Thank you.

CHAIRMAN CARTER: Mr. Litchfield, before we do the redirect, why don't we just take a five minute break.

MR. LITCHFIELD: And I have no redirect.

CHAIRMAN CARTER: Thank you, Mr. Olivera. Have a great day. Let's take about a five-minute break. I am looking at 1:45 on my clock here. We will come back at about 1:55. Okay. We are on recess.

(Off the record.)

CHAIRMAN CARTER: Okay. We are back on the record. And, Mr. Litchfield, you can call your next witness.

MR. LITCHFIELD: Thank you. But before I do that, I neglected to ask to have Mr. Olivera's single exhibit entered into the record, and that would have been Hearing Exhibit Number 16.

CHAIRMAN CARTER: Exhibit Number 16. Without objection, show it done. Okay.

(Exhibit 16 admitted into the record.)

MR. LITCHFIELD: FPL's next witness is Mr. Rene Silva.

CHAIRMAN CARTER: One second. Mr. Rene Silva.

MR. LITCHFIELD: And I believe he was present in the room when you swore Mr. Olivera.

CHAIRMAN CARTER: Good.

RENE SILVA

was called as a witness on behalf of Florida Power and Light Company, and having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. LITCHFIELD:

Q Mr. Silva, would you please state your name and business address?

A My name is Rene Silva, my address is 9250 West Flagler Street, Miami, 33174.

Q And by whom are you employed and in what capacity?

A By Florida Power and Light Company as Director of Resource Planning.

Q And have you prepared and caused to be filed 51 pages of prefiled direct testimony in this proceeding on October 16th, 2007?

A Yes.

Q Did you also cause to be filed errata to your testimony on January 25th, 2008?

A Yes, that is correct.

Q Do you have any further changes or revisions to your prefiled direct testimony other than the errata sheet that you just referenced?

A No, I do not.

Q If I were to ask you the questions contained in your prefiled direct testimony, would your answers be the same as

revised by the errata?

A Yes.

MR. LITCHFIELD: Chairman Carter, FPL requests that the prefiled direct testimony and errata of Mr. Silva be inserted into the record as though read.

CHAIRMAN CARTER: The prefiled testimony and the errata will be read into the record -- entered into the record as though read. How about that, is that better?

MR. LITCHFIELD: Perfect. Thank you.

CHAIRMAN CARTER: Excellent.

BY MR. LITCHFIELD:

Q Mr. Silva, are you sponsoring any exhibits with your prefiled testimony?

A Yes, I am sponsoring Exhibits RS-1 through RS-4.

Q Consisting of one page each?

A Yes.

MR. LITCHFIELD: Chairman Carter, these exhibits have been premarked for identification as Hearing Exhibits 17 through 20 respectively.

CHAIRMAN CARTER: Okay. Exhibits Number 17 through 20 on the exhibit list, Commissioners, are marked for identification.

MR. LITCHFIELD: Thank you, Chairman.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF RENE SILVA

DOCKET NO. 07_____-EI

OCTOBER 16, 2007

INTRODUCTION AND CREDENTIALS

Q. Please state your name and business address.

A. My name is Rene Silva. My business address is 9250 West Flagler Street, Miami, Florida 33174.

Q. By whom are you employed and what is your position?

A. I am employed by Florida Power & Light Company (FPL or the Company) as Senior Director, Resource Assessment and Planning (RAP).

Q. Please describe your duties and responsibilities in that position.

A. I manage the RAP group, the department that is responsible for developing FPL's integrated resource plan (IRP) and other related activities, such as developing system production cost projections for various generation capacity alternatives, analyzing demand side management (DSM) programs, and negotiating and administering wholesale power purchase agreements (PPAs).

Q. Please describe your educational background business experience.

A. I graduated from the University of Michigan with a Bachelor of Science Degree in Engineering Science in 1974. From 1974 until 1978, I was employed by the Nuclear Energy Division of the General Electric Company in

the area of nuclear fuel design. While employed by General Electric, I earned a Masters Degree in Mechanical Engineering from San Jose State University in 1978.

I joined the Fuel Resources Department of FPL in 1978, as a fuel engineer, responsible for purchasing nuclear fuel. While employed by FPL, I earned a Masters Degree in Business Administration from the University of Miami in 1986. In 1987 I became Manager of Fossil Fuel, responsible for FPL's purchases of fuel oil, natural gas and coal. In 1990, I assumed the position of Director, Fuel Resources Department, and in 1991 became Manager of Fuel Services, responsible for coordinating the development and implementation of FPL's fossil fuel procurement strategy. In 1998, I was named Manager of Business Services in the Power Generation Division (PGD). In that capacity, I managed the group that is responsible for coordinating (a) the development of PGD's long-term plan for the effective and efficient construction, operation and maintenance of FPL's fossil generating plants, (b) the preparation of PGD annual budgets and tracking of expenditures, and (c) the preparation of reports related to fossil generating plant performance. On May 1, 2002, I was appointed to my current position.

Q. Are you sponsoring any exhibits in this case?

A. Yes. I am sponsoring an Exhibits RS-1 through RS-4, which are attached to my direct testimony.

Exhibit RS-1 FPL's actual energy mix in 2006

Exhibit RS-2	FPL's projected energy mix in 2021, with and without the addition of Turkey Point 6 & 7
Exhibit RS-3	FPL's flexibility to incorporate increased DSM and renewable resources into the resource plan
Exhibit RS-4	Results of FPL's economic analyses regarding the relative cost of adding Turkey Point 6 & 7 to its portfolio.

Q. Are you sponsoring any sections of the Need Study for Electrical Power document included with FPL's Petition for a Determination of Need?

A. Yes. This document is referred to throughout FPL's filing as the "Need Study." I sponsor Sections I and X, and co-sponsor Sections II and III of the Need Study.

PURPOSE

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

A. The purpose of my testimony is to support FPL's request for an affirmative determination of need for FPL to proceed, consistent with the provisions of Commission Rule 25-6.0423, the Nuclear Power Plant Cost Recovery Rule, to construct up to 3,040 megawatts (MW) of new nuclear generating capacity at its Turkey Point site, to be designated Turkey Point Nuclear Units 6 & 7, including the associated transmission interconnection and integration facilities (Turkey Point 6 & 7 or the Project). FPL seeks to implement a process to

license, develop and construct these critical new nuclear baseload facilities with the aim of placing them into commercial operation by June 2018 and June 2020, respectively. Specifically, I explain why the addition of the proposed Turkey Point 6 & 7 nuclear units to FPL's generation portfolio is the best alternative available for FPL to: continue to provide reliable electric service at a reasonable cost; contribute to a balanced, fuel-diverse generation portfolio; and maintain an adequate reserve margin to meet its customers' projected electricity demand beginning in 2018. I also explain why the Project is a critical component of any plan to reduce emissions of carbon dioxide (CO_2), a key greenhouse gas (GHG), at the same time FPL continues to meet its customers' growing electricity needs.

Q. How is your testimony organized?

A. My testimony consists of 8 sections.

- Section 1 introduces FPL's witnesses and FPL's Need Study and Appendices.
- Section 2 outlines FPL's request for an affirmative determination of need and summarizes FPL's need for generation capacity through 2020.
- Section 3 discusses the value of fuel diversity to FPL's customers and how the Project provides fuel diversity benefits.
- Section 4 outlines the resource plan FPL utilized in its analysis of Turkey Point 6 & 7, and describes the role of Turkey Point 6 & 7 in that plan.

- Section 5 summarizes the results of the economic evaluation, and explains why the addition of Turkey Point 6 & 7 is the best alternative available for FPL to continue to provide reliable electric service at a reasonable price by maintaining a balanced, fuel-diverse generation portfolio, and maintaining an adequate reserve margin to meet its customers' future electricity demand.
- Section 6 describes the many benefits of adding Turkey Point 6 & 7 to FPL's generation portfolio, including the fact that this nuclear addition is an essential part of any plan to reduce GHG emissions while it continues to meet its customers' growing electricity needs.
- Section 7 presents a summary of the benefits already provided to our customers by FPL's existing nuclear units.
- Section 8 presents the significant adverse consequences FPL and its customers would face if FPL's petition is not granted.

SECTION 1 - FPL's WITNESSES AND NEED STUDY DOCUMENT

Q. How many witnesses are supporting FPL's petition through direct pre-filed testimony?

A. Fifteen witnesses are submitting direct testimony. In addition to the various exhibits included with the testimony of these witnesses, many of FPL's witnesses sponsor or co-sponsor a portion of FPL's Need Study and Appendices.

Q. Please summarize the topics addressed in the testimony of each of these witnesses.

A. As President of FPL, Mr. Armando Olivera discusses the overall support for the development of new nuclear generation, presents an overview of the need for Turkey Point 6 & 7, describes the magnitude of this project from the perspective of FPL and its investors, and discusses a few of the key reasons in support of FPL's petition in this proceeding.

Mr. Art Stall, President of FPL Group's Nuclear Energy Division, describes FPL Group's successful record of operating nuclear plants.

Mr. Steven Scroggs describes the steps FPL proposes to take in the licensing and deployment process for Turkey Point 6 & 7, discusses the site selection process, outlines the reactor design choices under consideration for this nuclear generation addition and provides the estimated cost range for the Project.

Dr. Leonardo Green presents FPL's load forecasting process, discusses the methodologies and assumptions used in that process, and presents the resulting load forecast, which was used in FPL's integrated resource planning process, and in the analysis performed related to the addition of Turkey Point 6 & 7.

Dr. Steve Sim describes FPL's integrated planning process, presents the need for new resources to meet customers' demand for electricity in 2007 through 2020, explains why DSM alone cannot meet this need and explains the analysis FPL performed to evaluate the addition of Turkey Point 6 & 7. Dr. Sim also presents the results of this analysis, explains his conclusion that based on FPL's evaluation, adding Turkey Point 6 & 7 in 2018 and 2020 is the best choice for FPL's customers, and discusses the adverse consequences of not adding Turkey Point 6 & 7 in 2018 and 2020, respectively.

Mr. Dennis Brandt presents FPL's DSM goals and achievements and FPL's DSM plan. In addition, Mr. Brandt discusses FPL's ongoing DSM-related activities and describes FPL's view regarding the potential contribution that DSM can make to help meet FPL's resource needs through 2020.

Ms. Henrietta McBee describes FPL's strong record in the development and use of renewables in its resource mix, and describes FPL's plans to pursue such resources, and the anticipated timing and magnitude of additions.

Mr. John Reed (Concentric Energy Advisors, Inc.) addresses the magnitude of the projected availability of renewable resources and demand side management that could contribute to meet FPL's future resource needs and explains why these resources will not be adequate to defer the need for Turkey Point 6 & 7. Mr. Reed also discusses the need for regulatory policies and

processes that can effectively support the development of new baseload nuclear generation.

Dr. Nils Diaz presents an overview of the current state of federal nuclear regulation, and explains how it has been modified to provide for a more efficient licensing process. He also describes the importance of nuclear generation as a part of the nation's generating portfolio and explains why new nuclear units can be built and operated safely and reliably.

Mr. Hector Sanchez discusses the transmission interconnection and integration requirements related to the addition of Turkey Point 6 & 7.

Mr. Gerard Yupp discusses the benefits of fuel diversity in FPL's system resulting from the addition of Turkey Point 6 & 7. He explains the basis for, and inherent uncertainty in, the various fossil fuel price forecasts used in FPL's economic analyses and discusses why such uncertainty requires the use of scenario analysis.

Mr. Claude Villard presents the nuclear fuel price forecast used in FPL's analysis, explains why FPL projects that nuclear fuel supplies will be readily available in the future, and discusses how delivery schedules for nuclear fuel and operating flexibility of nuclear units contribute to system reliability in a way that other technologies cannot match.

Mr. Ken Kosky testifies that the environmental compliance cost scenarios for sulfur dioxide (SO_2), nitrogen oxide (NO_x), mercury (Hg), and CO_2 considered by FPL as part of its analysis of Turkey Point 6 & 7 effectively address the appropriate range of those potential future costs. In addition, Mr. Kosky discusses the historical contributions of FPL's nuclear generation to lower CO_2 and other GHG emissions, and presents the magnitude of future reductions in emissions that will be realized through the addition of Turkey Point 6 & 7.

Ms. Kim Ousdahl describes how FPL will comply with the Commission's Nuclear Cost Recovery Rule as it applies to Turkey Point 6 & 7.

SECTION 2 – THE NEED FOR TURKEY POINT 6 & 7

Q. Please summarize FPL's request in this proceeding

A. FPL seeks from the Commission an affirmative determination of need for the addition to its generation portfolio of Turkey Point 6 & 7, two nuclear fuel generating units, each nominally with a net summer capacity rating of up to approximately 1,520 MW, currently projected to be placed in commercial operation by June 1, 2018 and June 1, 2020, respectively. FPL's request for a determination of need also includes the associated electric transmission facilities described in its petition, the need study, and the testimony of Mr. Sanchez.

As explained in greater detail by Mr. Scroggs, FPL's petition also requests that, in connection with granting a determination of need for Turkey Point 6 & 7, the Commission affirmatively determine that (1) FPL would be prudent to make payments for those long-lead procurement items that are reasonably necessary to preserve the potential for 2018-2020 in-service dates for the Project; and (2) when such payments are made prior to the completion of the Project's site clearing work, they are properly characterized as "pre-construction costs," to be recovered pursuant to the mechanism provided in the Commission's Rule 25-6.0423.

Q. Why is the addition of Turkey Point 6 & 7 needed?

A. The large addition of new nuclear baseload capacity provided by Turkey Point 6 & 7 is needed to maintain system reliability and provide fuel diversity at a reasonable cost for its customers. Specifically, this addition is needed to preserve a balanced, fuel diverse generation portfolio for FPL customers, as well as to maintain an adequate level of generation reserve margin through 2020. The addition of new baseload nuclear generation, as a component of FPL's fuel mix, is even more important given the high likelihood of significant GHG regulation in the near future, including the potential for either federal or state targeted or mandated reductions in emissions being imposed for the relevant planning horizon. The construction of new nuclear generation is necessarily a critical component of any plan to reduce system GHG, including CO_2, emissions.

In summary, Turkey Point 6 & 7 will provide needed baseload generating capacity, improve fuel diversity, reduce Florida's dependence on fuel oil and natural gas, reduce air emissions compliance costs, and contribute to the long-term reliability of the electric grid, and, based on FPL's analysis, will meet these criteria in a cost-effective manner.

Q. What is FPL's current fuel mix and how is it projected to change in the future?

A. In 2006, FPL's fuel mix consisted of natural gas (50%), nuclear generation (21%), coal (18%), fuel oil (9%), and other sources (about 2%). This fuel mix is presented in Exhibit RS-1. If only natural gas-fueled generation were to be added to FPL's system to provide its needs through 2020, the contribution of natural gas would increase to about 75% of total electricity delivered to FPL's customers by 2021, while that of nuclear fuel would decrease to about 16%. As will be discussed in Section 3, having such a high degree of dependence on natural gas would make FPL's system more susceptible to interruptions in the delivery of natural gas and to the type of gas price spikes that have become frequent in recent years.

Alternately, with the proposed addition of Turkey Point 6 & 7, and assuming that the size of each new nuclear unit is 1,100 MW, the share of electricity produced by natural gas would be about 65% in 2021, while that of nuclear generation would be about 27%. These fuel mix projections, both with and without the addition of Turkey Point 6 & 7, are shown in Exhibit RS-2. This

comparison shows how the addition of Turkey Point 6 & 7 begins to remedy what would otherwise be a dramatic long-term imbalance in FPL's fuel mix.

Q. What quantity of firm resources will FPL need by 2020 and what are some of the ways in which those needs may be met taking into account the proposed addition of Turkey Point 6 & 7?

A. In 2011 through 2020, FPL will need about 8,350 MW of total additional firm resources, including approximately 1,610 MW to replace expiring purchase power agreements (PPA), to continue to meet its reliability criteria. FPL estimates that it can offset approximately 1,490 MW of this resource need through energy efficiency and demand side management gains between 2011 and 2020. FPL also projects that about 290 MW of the remaining resource need will be provided from specific renewable resources through new power purchase agreements with existing renewable suppliers that replace expiring contracts, as well as new contracts with all the bidders who proposed firm capacity in response to FPL's April 2007 request for proposals (RFP) for renewable resources. Planned capacity uprates at FPL's four existing nuclear units will contribute about 414 MW. This combination of resources, even if fully achieved, but without the addition of Turkey Point 6 & 7, would only reduce the capacity needed to maintain FPL's 20% reserve margin through 2020 to the 6,156 MW shown on Dr. Sim's Exhibit SRS-1.

The Commission's approval of the proposed Turkey Point 6 & 7 facilities would provide between 2,200 MW and 3,040 MW of nuclear generation,

leaving a remaining capacity need of yet another 3,120 MW to 3,960 MW through 2020. FPL has not yet specified what resources will be implemented in the future to meet this remaining need, and it is anticipated that such need could be met by a combination of future renewable resources, energy efficiency increases, new gas-fueled generation capacity, and other resources, depending on the future availability and the cost-effectiveness of these resources. If actual growth in demand were to be lower than projected, FPL's plan would be adjusted to reduce the amount of new gas-fueled generation to be added. However, neither the opportunity to accommodate additional cost-effective DSM and renewable resources, nor the need for Turkey Point 6 & 7 would be affected. Exhibit RS-3 demonstrates this point graphically, i.e., that with even a lower-than-projected rate of growth in FPL's service territory, there will be more than ample opportunity to continue to pursue additional DSM and renewable resources as part of FPL's energy portfolio, in addition to Turkey Point 6 & 7.

However, based on what we know today, it is anticipated that a significant portion of the 3,120 MW to 3,960 MW remaining resource need would have to be met with new natural gas-fueled generation added by FPL or obtained under power purchase agreements. Furthermore, if the addition of Turkey Point 6 & 7 were not approved, even more natural gas-fueled generation would be the only practical substitute. At present, FPL knows of no other alternative that can cost-effectively, provide the reliable baseload capacity to

meet FPL's customers' future resource needs that would be provided by Turkey Point 6 & 7.

In short, even with the addition of Turkey Point 6 & 7, FPL projects an additional need of at least 3,120 MW to 3,960 MW of capacity, which could accommodate even the more aggressive projections of available DSM and renewable resources, discussed more fully by John Reed in his testimony. Any such additional renewable generation capacity and DSM would reduce the need for even more new natural gas-fueled generation, not the need for Turkey Point 6 & 7. In other words, without Commission approval for Turkey Point 6 & 7 it will not be possible to reduce dependence on natural gas in Florida regardless of whether additional renewable generation capacity or DSM is achieved.

Q. Please describe the extent to which FPL's plan reflects how additional future DSM programs will help avoid some of the need for new generation capacity that you have identified above.

A. As Dr. Sim explains, FPL's generation capacity need projections already reflect all of the cost-effective DSM currently known to FPL, including not only FPL's current DSM Goals, but also significant amounts of additional DSM that FPL has identified since the DSM Goals were approved. It is important to note that, as presented by Mr. Brandt, through 2005 FPL's DSM programs have enabled FPL to avoid the need for more than 4,200 MW of generation capacity, equivalent to about 20% of FPL's 2006 peak load.

Between 2005 and 2011, FPL projects that an additional 710 MW of demand reduction will be achieved through DSM increases. Between 2011 and 2020, FPL currently projects that another 1,490 MW of capacity equivalent DSM demand reduction will have been added for a total cumulative capacity avoidance due to DSM of more than 6,400 MW. To underscore the magnitude of this accomplishment, the avoided capacity achieved through FPL's DSM programs is between two and three times the size of Turkey Point 6 & 7. All the projected DSM additions have been reflected in FPL's current resource plan.

FPL will continue to consider and aggressively pursue new DSM programs to reduce the need for new capacity, and reduce GHG emissions. However, as stated by Dr. Sim and Mr. Brandt, the potential for additional cost-effective DSM is not nearly sufficient to reduce or defer the need for the proposed new baseload nuclear facilities, Turkey Point 6 & 7.

Q. Does FPL's resource plan reflect all currently known potential future contributions from renewable resource alternatives?

A. Yes. FPL's resource plan already reflects contributions from all currently available renewable resources, as well as new renewable resources that have indicated they plan to provide firm generation capacity during this period. These projected contributions include resources that FPL plans to obtain through new power purchase agreement with existing renewable power suppliers to replace expiring contracts, as well as with all bidders that

proposed firm generation capacity using renewable resources in response to FPL's April 2007 RFP. FPL has already initiated discussions with these suppliers.

As shown on Exhibit RS-3, to the extent that additional cost-effective renewable resource alternatives become available in the future, they could be applied to reduce the sizable remaining capacity need described above (between 3,120 MW and 3,960 MW) and incorporated into FPL's resource plan. Unfortunately, the magnitude and timing of additional renewable resources is highly uncertain; thus, their contribution cannot be counted on when considering the need for Turkey Point 6 & 7. Mr. Reed also addresses this in his testimony. But it is important to emphasize that renewable resources will continue to be an important potential resource option to meet FPL's significant needs even beyond those met by the addition of Turkey Point 6 & 7. The potential for future contributions from other renewable resources is discussed further in Section 4 of my testimony.

Q. What would the reserve margin be without the addition of Turkey Point 6 & 7 in 2018 and 2020?

A. First, it is important to understand that if no generation capacity is added between 2011 and 2017, FPL's reserve margin would be about 1%, effectively no reserve margin, by 2018. However, if we start with the premise that FPL will have added sufficient resources to meet its 20% reserve margin reliability criterion through 2017, without the addition of Turkey Point 6 & 7 in 2018

and 2020, FPL's reserve margin would fall to 17.5% in 2018, 15.1% in 2019 and 12.6% in 2020, far less than the reserve margin requirement that FPL and the Commission have agreed is necessary to ensure system reliability. Also, it should be noted that without Turkey Point 6 & 7 a very significant portion of the reserve margin in those years would be provided by DSM rather than generation resources, rendering FPL's system less reliable. Furthermore, without the addition of Turkey Point 6 & 7 in 2018 and 2020, FPL's capacity need would exceed 2,700 MW by 2021, and continue to grow thereafter. For these reasons, pursuing the potential addition of Turkey Point 6 & 7 as FPL has proposed is a critical part of FPL's overall resource plan to maintain system reliability and ensure FPL meets its capacity needs through 2020 and beyond.

Q. Did FPL consider other large baseload alternatives to meet its generation capacity need in 2018 and 2020?

A. Yes. FPL evaluated coal-fired Integrated Gasification Combined Cycle (IGCC) and gas-fired combined cycle (CC) generation in 2018 and 2020 as baseload alternatives to Turkey Point 6 & 7. The results of FPL's evaluation are discussed in detail by Dr. Sim and summarized in Section 5 of my testimony. These results, combined with the advantages provided by the addition of Turkey Point 6 & 7 discussed in Section 6, demonstrate that the addition of Turkey Point 6 & 7 is the best, cost-effective and technically feasible alternative to meet FPL's needs in 2018 and 2020.

Q. Does the addition of Turkey Point 6 & 7 also help reduce system GHG emissions?

A. Yes. Turkey Point 6 & 7 will add up to 3,040 MW of non-GHG emitting generation. Further, because these units will operate at very high capacity factors, FPL's least efficient generating units that emit GHG will operate less and overall system GHG emissions will be significantly reduced. Mr. Kosky and Dr. Sim address this in more detail in their testimonies.

In summary, it is clear that without the addition of Turkey Point 6 & 7 in 2018 and 2020, FPL's customers would be served by a far less fuel-diverse, less reliable system with greater fuel cost volatility and significantly higher GHG emissions. The addition of Turkey Point 6 & 7 is needed to provide adequate electricity at a reasonable cost to FPL's customers.

It is also important to recognize that granting a determination of need is not an irreversible commitment to a specific resource development path. Rather, the determination of need for Turkey Point 6 & 7 is a first, crucial step in a process that, as Mr. Scroggs describes in detail, is equivalent to purchasing an option to maintain the possibility of adding new nuclear generation capacity to FPL's portfolio in 2018 and 2020. FPL will retain substantial flexibility to adjust the future development and construction process in light of additional information that will become available in future years; and the Commission will retain the ability to review and evaluate future decisions regarding the

Project contemporaneously, thus ensuring that the final result is prudent and in FPL customers' long-term best interest.

SECTION 3 – VALUE OF FUEL DIVERSITY

Q. What are the benefits of maintaining fuel diversity in FPL's system?

A. The primary benefits of fuel diversity are greater system reliability and reduced fuel price volatility. An electric system that relies on a single fuel and a single technology to generate all the electricity needed to meet its customers' demand, all else equal, is less reliable than a system that uses a more balanced, fuel-diverse generation portfolio. In addition, greater fuel diversity mitigates the impact of wide or sudden swings in the price of one fuel, as we have witnessed in natural gas markets over the last several years.

Q. Please explain how fuel diversity enhances system reliability.

A. An electric system that relies exclusively on one fuel is inherently more susceptible to events that cause delays or interruptions in the supply of that fuel. Such a system cannot rely on alternative generation facilities that use other fuels to make up for reductions in the constrained fuel.

A generation portfolio that relies upon a fuel-diverse system with adequate generation reserve margin is capable of producing electricity using a number of different fuels and has sufficient redundancy in generation capacity. Such

a system retains the flexibility to offset the reduced availability of one constrained fuel by generating sufficient electricity using other fuels.

Q. Does diversity related to the process of fuel transportation and delivery also improve system reliability?

A. Yes. The ability of a generating system that relies on only one fuel transportation and delivery process to serve its customers can be severely impaired by interruptions in the transportation and delivery of that single fuel to the generating plants. This is particularly true when the generating plants use natural gas, because the reliable operation of these plants depends on uninterrupted, hour by hour delivery of natural gas to the plants. Diversity in fuel transportation and delivery processes enables a utility to mitigate the effects of any such fuel delivery interruptions by limiting the amount of generation that is affected by a single event and makes replacement of unavailable generating capacity more attainable.

Because different fuels usually originate from different geographical areas and are transported and delivered via different processes, having a fuel diverse generation system helps mitigate the effect of interruptions in fuel transportation and delivery, as well as production.

Q. Does diversity, not only in fuel type but in generation technology, also improve reliability?

A. Yes. Occasionally, equipment design or manufacturing problems manifest themselves in the form of systematic failure of the same part in a number of

generating plants that utilize the same part design, or those plants that use parts produced in the same production batch. Having diversity in generation technology is also important because if a generic equipment problem occurs, it would affect a smaller portion of a utility's generation portfolio, making it easier for the utility to mitigate the effect of that problem without adversely affecting service to its customers. Because generating units that use different fuels usually also use different technologies, a fuel diverse system also helps mitigate the effect of equipment problems that affect one specific type of generation technology, such as for example, gas turbines.

Q. Which of the reliability benefits attributed to fuel diversity that you have discussed are applicable to the proposed addition of Turkey Point 6 & 7?

A. All of the benefits I have described above are applicable to the addition of Turkey Point 6 & 7. Adding up to 3,040 MW of nuclear baseload generation to FPL's system would significantly reduce FPL's reliance on natural gas and will enable FPL to more effectively address and offset decreases in natural gas supply. The factors that could affect gas production and transportation would not affect nuclear fuel. In his testimony, Mr. Villard describes how the production, transportation and delivery of nuclear fuel is completely different from the process of production, transportation and delivery of natural gas that is described by Mr. Yupp. Therefore, any events that would affect gas production, transportation and delivery would not similarly affect Turkey Point 6 & 7. Also, the technology to be used in Turkey Point 6 & 7 will be

different from that used in all of FPL's gas-fueled units, so technical problems that may affect the gas units will not affect Turkey Point 6 & 7.

Q. Does Turkey Point 6 & 7 provide additional reliability benefits?

A. Yes. Nuclear generating facilities typically have sufficient fuel in the core to operate at full power for approximately eighteen months without the need for additional fuel. A natural gas-fired generating facility, however, requires that natural gas be delivered through an interstate pipeline to the plant site continuously in order to continue to operate. As explained by Mr. Villard, this is a fuel advantage over natural gas because it provides certainty that the nuclear units will not be affected by future fuel supply interruptions or delays. In addition, nuclear fuel is typically delivered to Turkey Point 6 & 7 at least two months prior to the time the fuel is needed to conduct the refueling of each unit. In effect, at any point in time a nuclear unit has at least sixty days of full power fuel inventory, and as much as twenty months of inventory, compared to natural gas-fueled generation which cannot cost-effectively provide similar on-site fuel inventory capability. In other words, nuclear generation adds significant additional reliability value related to fuel supply and transportation.

In addition, as discussed by Mr. Villard in his testimony, because reserves of uranium in North America are so large, nuclear fuel supply from secure sources is assured for the entire operating life of the plant.

Q. Does fuel diversity offer value other than increased reliability?

A. Yes. This point is also discussed by Mr. Yupp. Fuel diversity helps mitigate the effects of price volatility in one or two fuels on the price of electricity. For example, if a utility relies solely on natural gas to produce all the electricity needed by its customers, any increase or decrease in the market price of natural gas would translate into a direct and comparable increase or decrease in the cost of electricity. Because natural gas prices are projected to be volatile in the future, electricity customers would be subject to significant volatility in the future cost of electricity. Recent history has demonstrated just how volatile natural gas prices can be. Also, as Mssrs. Villard and Yupp testify, the prices of nuclear fuel are low and stable relative to other fuels, and changes in the price of nuclear fuel are not directly linked to changes in the prices of natural gas and fuel oil. Therefore, having a fuel diverse portfolio that includes significant contributions from nuclear fuel would necessarily help dampen the effect of volatility in natural gas prices.

SECTION 4 – RESOURCE PLANS UTILIZED IN ANALYSIS

Q. What resource plans were used by FPL in the economic analysis of Turkey Point 6 & 7?

A. FPL utilized three resource plans in its analysis of Turkey Point 6 & 7. The three plans are presented in Exhibit SRS-4 attached to Dr. Sim's testimony. The three plans are (1) the Plan with Nuclear, that includes Turkey Point 6 &

7 in 2018 and 2020, respectively, and further assumes that the size of each nuclear unit is 1,100 MW, (2) the Plan without Nuclear- CC, that includes the construction of two gas-fueled baseload combined cycle units in 2018 and 2020, respectively, instead of nuclear units, and (3) the Plan without Nuclear-IGCC, that includes the construction of two baseload IGCC units in 2018 and 2020, respectively, instead of nuclear units. All plans include an identical set of new resources through 2017, and the plans differ only slightly after 2020. The objective of the economic analysis is to isolate the addition of Turkey Point 6 & 7 in 2018 and 2020, respectively, and compare it to the effect of adding gas-fueled combined cycle generation instead of nuclear generation, or IGCC generation instead of nuclear generation, in those years.

Q. Is it possible that the other resource additions reflected in the resource plans between 2011 and 2017 would change in the future?

A. Yes. A utility's resource plan is not, and cannot be, static. The objective of the generation additions reflected for the period 2011-2017 and those shown after 2021 in the resource plans presented by Dr. Sim is to provide a reasonable, neutral backdrop against which the proposed addition of Turkey Point 6 & 7 can be fairly compared to other available generation capacity alternatives that FPL could use to meet its future capacity needs in 2018 through 2020 in place of Turkey Point 6 & 7. At this time, FPL is only committed to pursuing those resources that have been specifically outlined in my testimony: that is, the projected DSM increases, the nuclear uprates, the purchase of capacity from renewable resources, and Turkey Point 6 & 7.

Therefore, as the projected need for new resources in the future changes, and as other resource alternatives become available, and as factors that affect some or all of the resource alternatives change, FPL's resource plan would be modified. Nevertheless, these resource plans reflect reasonable choices for meeting FPL's needs between 2011 and 2017, and after 2020, based on what is known today. In summary, they provide appropriate frames of reference within which to assess the need for and viability of Turkey Point 6 & 7.

Q. How many megawatts of new and replacement resources does FPL project it will need for the period 2011 through 2020?

A. As stated previously in my testimony, FPL projects it will need to add approximately 8,350 MW of new and replacement resources from 2011 through 2020. FPL estimates that the equivalent of 1,490 MW, or almost 18% of these needed resources, will be provided by increases in DSM during this period. These resource plans also include 414 MW of additional nuclear generation resulting from uprates of FPL's existing nuclear units and approximately 290 MW of renewable resources. The proposed facility at Turkey Point 6 & 7 will provide between 2,200 MW and 3,040 MW. Natural gas-fueled advanced combined cycle units are included in the plan to provide the remaining 3,120 MW to 3,960 MW of new resources required in this period. As discussed earlier in this testimony, FPL has not committed to these natural gas-fueled additions although, at present, we do not know to what extent other resource alternatives could be developed and implemented to meet this need. Nevertheless, FPL will continue to pursue and encourage

development of such alternatives and would welcome any that could cost-effectively and reliably reduce gas dependence.

Q. What is FPL doing to promote greater renewable development from non-affiliated generators?

A. FPL is committed to promoting greater renewable investment in Florida by working with existing and potential renewable generators and offering for negotiation contract terms that enable developers of renewable resources to choose, from a diverse portfolio of avoided units, the payment profile that is most suitable for their projects while protecting the interest of our customers. In addition, FPL has filed a new standard offer contract for renewable generation consistent with the Commission's new rule on renewable energy. FPL also issued in April 2007 a request for proposals to provide to FPL electric capacity and/or energy produced from renewable resources. On July 2, 2007 FPL received five proposals. Two proposals (combined) offered 100 MW of capacity using biomass. One proposal offered 44 MW from municipal solid waste. One proposal offered 876,000 MWh of annual energy (but no capacity). One proposal expressed interest in developing and implements rooftop photovoltaic technology. FPL is currently evaluating these proposals and will seek to enter into contracts that will benefit FPL's customers, with all bidders that proposed to sell capacity and energy from renewable resources.

Q. Has FPL reflected in its resource plan all of the renewable contract extension opportunities and renewable proposals submitted in response to FPL's request for proposals?

A. Yes. FPL has assumed that all expiring contracts with renewable generators that provide firm capacity will be extended and has counted that capacity as part of its resource plan. FPL also has assumed that all proposals submitted in response to the request for proposals that offered firm capacity from renewable resources will result in contracts and has reflected that capacity in its resource plan. Thus, from the standpoint of the resource plan, FPL has already optimistically assumed that it will be able to contract for all of these renewable projects.

Q. What are FPL's plans regarding the development of additional renewable resources?

A. As noted by Ms. McBee in her testimony, in June 2007 FPL announced the St. Lucie Wind Project, a 3 to 4.5 MW wind generation project that FPL proposes to site near its St. Lucie nuclear generating plant. FPL is currently pursuing the necessary permits, as well as conducting the review of all aspects of this project. FPL will continue to consider additional wind generation opportunities to add to its renewable portfolio. FPL is also developing the 250 kW solar photovoltaic facility in Sarasota that is part of FPL's Sunshine Energy Program and will continue to consider additional solar generation opportunities to add to its portfolio. Additionally, FPL recently announced a major solar energy initiative in Florida which is expected to result in installation of up to 300 MW of solar generation capacity based on a technology that, although unproven, is very promising. As Ms. McBee explains, this initiative will begin with installation of about 10 MW of

capacity, subject to business due diligence and any necessary regulatory approvals. These proposed renewable resource development efforts have not been reflected in the analysis performed by FPL. However, the results would not have been different because the effect of these renewable resources would have been reflected equally in all three resource plans considered in FPL's analyses, in the form reduced use of natural gas and fuel oil to produce electricity. Further, as I explain below, significant amounts of additional renewable resources, were they to become available, could be incorporated into FPL's resource plan without reducing the need for Turkey Point 6 & 7 in 2018 and 2020, respectively.

FPL is also actively involved with Florida Atlantic University's Center of Excellence for Ocean Energy Technology in its effort to develop this non-emitting renewable technology.

Q. Can renewable resources eliminate or defer the need for Turkey Point 6 & 7 in 2018 and 2020?

A. No. The need for Turkey Point 6 & 7, as identified in Dr. Sim's testimony, is in addition to the available renewable resources. Further, as I noted at the outset of my testimony, in addition to Turkey Point 6 & 7, FPL estimates that it will need between 3,120 MW and 3,960 MW of new generation capacity between 2011 and 2020, of which more than 1,600 MW would replace expiring PPAs. Moreover, it is projected that new capacity will be needed to meet additional demand growth beyond 2020.

As Ms. McBee indicates in her testimony, FPL is actively pursuing additional renewable resources. The technology of many of these renewable options is still developing and will not be commercially available in significant quantities during this period, and some of these options (such as wind generation) cannot be counted on to reliably operate during the system peak hours. However, it is not necessary to select between renewable technology and new nuclear generation because to the extent that new reliable, cost-effective renewable resources become available they could be incorporated into FPL's resource plan in place of the uncommitted new generation that would otherwise use natural gas, without affecting the need for Turkey Point 6 & 7.

For these reasons, I believe it would be unreasonable for the Commission to deny a need determination for Turkey Point 6 & 7, based on an assumption that other technologies which, at least in Florida, have not yet demonstrated their ability to provide sufficient firm capacity to meet demand growth or generate large quantities of electricity cost-effectively, may become available in sufficient quantities and may be economically competitive in the future.

Q. Would your answer change if a significant Renewable Portfolio Standard is adopted?

A. No. Turkey Point 6 & 7 will still be needed even if a Renewable Portfolio Standard (RPS) is adopted at the state or federal level. Although FPL will continue to pursue power from both traditional renewable resources such as

wind, solar, biomass, landfill gas, and municipal solid waste, and emerging technologies such as ocean current, with or without an RPS, these sources will not be sufficient to provide all the generation capacity needed to meet the 20% reserve margin reliability criterion through 2017, let alone defer the need for Turkey Point 6 & 7 in 2018 and 2020.

In addition, FPL believes that growing concern with global warming will likely require FPL to significantly reduce its future GHG emissions while continuing to serve growing customer demand. Because new nuclear generation is the most effective means of meeting growing demand while adding no GHG emissions to the atmosphere, the construction of new baseload nuclear generating facilities at Turkey Point 6 & 7 is an essential part of any successful plan to reduce GHG emissions in the future.

Q. How would FPL accommodate additional increases in DSM and/or future renewable resource generation facilities that may be developed in the future?

A. Proceeding with the addition of Turkey Point 6 & 7 will provide the baseload capacity addition necessary to ensure that FPL's customers will continue to receive reliable electric service at reasonable cost, while FPL maintains the flexibility to utilize additional cost-effective renewable resources as they are developed and to facilitate increased customer participation in additional cost-effective DSM programs. As indicated earlier in my testimony and as shown in Exhibit RS-3, the extent these measures are successful, all the incremental

cost-effective DSM that could be implemented and all other renewable generation that could be obtained could be easily incorporated into FPL's resource plan without reducing the need for Turkey Point 6 & 7 in 2018 and 2020.

The only way one could conclude that there is no need for Turkey Point 6 & 7 in 2018 and 2020 would be to assume that the magnitude of additional customer participation in DSM programs and renewable resources available by 2020, above the levels already projected by FPL, would be sufficient to eliminate the need for not only the entire 3,120 MW - 3,960 MW of need that, in the analysis performed for this filing, are assumed to be met by natural gas generation, but also the capacity (between 2,200 MW and 3,040 MW) that Turkey Point 6 & 7 will provide. It would not be prudent to base FPL's resource planning decisions on such a far fetched theory.

Q. What other alternatives exist to new nuclear generation?

A. As a practical matter, at present the only reliable alternative to nuclear generation for meeting FPL's projected capacity need is to add more gas-fueled combined cycle generation. The Commission's recent rejection of the FPL Glades Power Park project shows that FPL cannot expect to add pulverized coal generation. The results of FPL's economic analysis presented as part of this testimony and that of Dr. Sim show that the total cost of IGCC, even without carbon capture and sequestration (CCS), would be significantly greater than both FPL's estimated cost range for new nuclear generation and

new gas-fueled generation. Furthermore, until CCS technology can be effectively implemented, adding IGCC generation would be inconsistent with FPL's objective of reducing GHG emissions in the future. Lastly, the magnitude of FPL's projected future capacity need is so large compared to even the more optimistic reasonable expectations for additional cost-effective DSM and renewable resources, that any increased development in these areas – over and above the aggressive goals already reflected in FPL's resource plan – would only help reduce the need for additional gas-fueled generation.

Furthermore, even in an extremely unrealistic scenario in which much greater amounts of cost-effective DSM and renewable resources than currently estimated were to become available and demand growth were to be much lower than projected, such that such reduced demand could be met by DSM and renewable resources, it would be possible for FPL to adjust the pace of development of Turkey Point 6 & 7 to match the timing of the need. On the other hand, failure to initiate full development of this option, which would be the consequence of the Commission not granting FPL's petition, would irrevocably close off the possibility of new nuclear generation in 2018 and very likely in 2020 as well. The prudent course of action is to grant the determination of need sought in FPL's petition to preserve the option of adding Turkey Point 6 & 7 in 2018 and 2020.

SECTION 5 – RESULTS OF FPL'S EVALUATION

Q. Did FPL perform an economic analysis to compare the cost to customers that would result from adding Turkey Point 6 & 7 by 2018 and 2020, respectively, versus that resulting from adding other forms of generation?

A. Yes. Dr. Sim describes the analysis process in his testimony. FPL calculated the estimated cost, in cumulative net present value revenue requirements (CPVRR), associated with each of the resource plans under 9 different scenarios or combinations of future natural gas and fuel oil price forecasts and environmental compliance cost projections. For each of these scenarios FPL then calculated the capital cost for Turkey Point 6 & 7 that would make the resulting CPVRR for the Plan with Nuclear equal to the CPVRR for the Plan with Gas, and the Plan with Coal, respectively. In other words, this analysis produced a breakeven capital cost for Turkey Point 6 & 7 versus each of the alternate plans was calculated under each of the 9 scenarios. These breakeven capital costs were then compared to FPL's estimated capital cost range for the Project presented by Mr. Scroggs.

To the extent that in any scenario the breakeven capital cost obtained from the analysis is higher than FPL's estimated capital cost range for the Project, the addition of Turkey Point 6 & 7 would result in a lower cost than adding gas-fueled generation or coal-fueled generation.

Q. What were the results of the economic analysis comparing Turkey Point 6 & 7 with other baseload generating resources (IGCC or gas-fired combined cycle generation)?

A. In almost all the scenarios, the breakeven capital costs calculated in FPL's analysis, expressed in dollars per kW in 2007 dollars, are greater than the entire estimated cost range for Turkey Point 6 & 7. Specifically, as shown on my Exhibit RS-4, as well as on Exhibit SRS-8, attached to Dr. Sim's testimony, when the Plan with Nuclear is compared to the Plan without Nuclear-CC, in 8 of 9 scenarios the breakeven capital cost is higher than the entire estimated nuclear cost range; while in the other one scenario the breakeven cost falls within the estimated nuclear cost range. When the Plan with Nuclear is compared to the Plan without Nuclear-IGCC, the breakeven capital cost is higher than the entire estimated nuclear cost range in all 9 scenarios.

In other words, the results of FPL's economic analysis show, based on FPL's estimated capital cost range for the Project, that the addition of Turkey Point 6 & 7 in 2018 and 2020 can reasonably be expected to provide to FPL's customers the many benefits of nuclear generation at a cost that is lower than the cost of adding gas-fueled generation under almost all scenarios, and lower than the cost of adding IGCC under all 9 scenarios.

Moreover, the one scenario in which the cost of adding gas-fueled generation is comparable to that of adding new nuclear generation consists of medium or low gas prices and low CO_2-related costs. If these conditions were to occur, because even with the addition of Turkey Point 6 & 7 natural gas would contribute a significant portion of FPL's electricity, the cost of electricity would be the lowest of all scenarios, so FPL's customers would preserve the benefit of the low gas price and low CO_2-related costs. However, this scenario represents a very small part of the range of possible future market outcomes and, primarily because of the heightened concern regarding GHG emissions it is less likely to occur. On the other hand, under conditions in which FPL's customers would be more vulnerable due to higher natural gas prices and higher CO_2-related costs, the addition of Turkey Point 6 & 7 would result in significant cost savings. Therefore, in order to reject Turkey Point 6 & 7 one would have to be certain that both natural gas prices and CO_2-related costs will be low in the future, and that fuel diversity has very little value.

Q. Will this be the final economic analysis opportunity for the Commission to assess the cost-effectiveness of Turkey Point 6 & 7?

A. No. As discussed by Mr. Scroggs and Ms. Ousdahl, additional analyses will be performed in connection with the annual review process established pursuant to Commission Rule 25-6.0423, the Nuclear Power Plant Cost Recovery Rule. This approach will enable FPL, the Commission and other interested parties additional opportunities to periodically evaluate, at regular intervals throughout the licensing, design and construction process, the

Project's costs and the continuing feasibility of completing the Project based on updated information. If a future analysis demonstrates that continuing the Project would no longer be in the best interests of FPL's customers, the Project could be terminated, postponed or modified with only the costs incurred or irreversibly committed up to that time subject to recovery. Thus, a determination of need in this case will not be the Commission's final word regarding the Project.

Q. Do these analysis results reflect all the benefits of adding new nuclear generation to FPL's portfolio?

A. No. The results of the scenario analysis reflect the economic benefit of adding new nuclear generation under varying natural gas and fuel oil prices and environmental compliance costs, but the analysis does not explicitly factor in any benefit for the nuclear alternative relative to two of the statutory criteria for granting a determination of need: improving fuel diversity and reducing Florida's dependence on natural gas and fuel oil. Accordingly, even in the one scenario where the results of FPL's economic analysis shows rough equality between adding new nuclear generation and adding new gas-fueled generation, it is evident that application of the requirements of sections 366.92(1) and 403.519(4), Florida Statutes, compels selection of Turkey Point 6 & 7 as the preferred alternative.

Q. How would the addition of Turkey Point 6 & 7 in 2018 and 2020, respectively, affect FPL's customers' bills, compared to the effect of adding natural-gas fueled combined cycle units in those years in place of the new nuclear units?

A. In the years preceding the in-service dates of Turkey Point 6 & 7, monthly bills are projected to be higher than with the addition of combined cycle units because, as explained by Mr. Scroggs and Ms. Ousdahl, costs related to the nuclear additions would be recovered during the period of nuclear plant licensing, development and construction, while the fuel and environmental compliance cost benefits would not occur until after the nuclear units are placed in service. However, it should be noted that the ongoing cost recovery process is very effective in mitigating a sudden rate increase when Turkey Point 6 & 7 are placed in service. Moreover, within a relatively short time after the nuclear units have been placed in service it is anticipated that these fuel and environmental compliance benefits will, under almost all future conditions, result in lower monthly bills than with the addition of combined cycle units .

As explained in Dr. Sim's testimony the approximate bill difference has been estimated for the scenario with the Medium Gas Cost and the Environmental Compliance Cost Forecast "ENV II" by dividing the difference in that year's revenue requirement between the Plan with Nuclear and the Plan Without Nuclear-CC by the projected total electricity sales for that year, and

multiplying the result by 1,000 kWh. For the purpose of this calculation it was assumed that the capital cost of Turkey Point 6 & 7 would be $3,800 per kW, about the middle of the estimated overnight capital cost range presented by Mr. Scroggs. The results of this calculation are presented in Dr. Sim's Exhibit SRS-09.

As can be seen from the result presented by Dr. Sim, in 2021, the first full year in which both Turkey Point 6 & 7 are in operation, the effect of adding Turkey Point 6 & 7 is an average cost of electricity that is lower by $0.36/1,000 kWh, compared to adding gas-fueled generation. This benefit will increase in later years.

SECTION 6 - BENEFITS PROVIDED BY TURKEY POINT 6 & 7

Q. Will the addition of Turkey Point 6 & 7 help FPL achieve the benefits of fuel diversity described in Section 3?

A. Yes. The addition of these new baseload nuclear units will contribute significantly to fuel diversity in FPL's system compared to adding combined cycle units, and will therefore have a very beneficial effect on system reliability. In addition, the nuclear additions will rely on a different, more stable fuel supply than that of natural gas, and on a different and separate fuel transportation and delivery process that is less susceptible to interruptions than either a gas-fueled addition or an IGCC addition.

Q. Will the addition of Turkey Point 6 & 7 also provide benefits regarding lower fuel cost and greater fuel cost stability?

A. Yes. Turkey Point 6 & 7 will result in lower system fuel costs and greater fuel cost stability for FPL and its customers, because it will use nuclear fuel which has historically had, and is projected to have in the future, a very low cost, as well as far less volatility than any fossil fuel. As Mssrs. Villard and Yupp state, it is projected that the price of nuclear fuel will continue to be low and stable relative to other fuels. In addition, because Turkey Point 6 & 7 is projected to operate at capacity factors above 90% and will therefore reduce generation from more costly generating units, the addition of these nuclear units will help reduce the volatility in the overall system cost of fuel.

Q. Will the addition of Turkey Point 6 & 7 significantly reduce FPL's use of natural gas?

A. Yes. The electricity that will be produced from nuclear fuel at Turkey Point 6 & 7 will primarily displace natural gas that otherwise would be burned if FPL's generation capacity need beginning in 2018 were to be satisfied by adding natural gas-fired generation. For example, as explained by Mr. Yupp, over the first 19 full years of operation of both new Turkey Point nuclear units, assuming that the size of each nuclear unit is 1,100 MW, FPL will reduce the use of natural gas by almost 2.2 billion MMBtu compared to the amount of natural gas it would use without these nuclear additions. This decrease in natural gas use, which is a measure of the reduction in FPL's reliance on natural gas achieved by the new Turkey Point nuclear units is

equivalent to the total quantity of natural gas FPL used during the last 7 years (2000 through 2006).

Q. How will new nuclear generation at Turkey Point 6 & 7 help reduce GHG emissions?

A. Unlike IGCC and natural gas-fueled generation, nuclear generation does not produce any GHG emissions, including CO_2 emissions. This fact, combined with the large size of the proposed Turkey Point nuclear units and the anticipated high capacity factor of nuclear generation makes Turkey Point 6 & 7 the most effective method of reducing future GHG emissions.

For example, FPL projects that between 2017 (prior to the first nuclear addition) and 2021 (after both nuclear units have been added) annual system GHG emissions will decrease by 1.1 million tons, or almost 2%, despite the fact that total electricity consumption will increase by 16,276 Gigawatt hours (GWh) or 10.3%. If gas-fueled combined cycle generation were to be added in place of Turkey Point 6 & 7, GHG emissions would instead increase by 5.8 million tons, or almost 9%. As Dr. Sim explains, with Turkey Point 6 & 7 GHG emissions will be almost 7 million tons lower in 2021 alone than they would be with gas-fueled additions. These results demonstrate that the addition of Turkey Point 6 & 7 is an integral and necessary part of FPL's plan to achieve GHG emission reductions in the future.

This is a critical consideration, particularly in light of growing concerns with global warming and the expectation that GHG emissions are likely to be regulated in the near future. Reducing future GHG emissions, while continuing to provide reliable electric service to a growing customer base at a reasonable cost, will prove to be an extremely difficult challenge. If all of these important and urgent public policy objectives are to be achieved, it is essential that the construction of new nuclear generation be pursued immediately and diligently. The most significant way for FPL to ensure lower GHG emissions in the current regulatory environment is for the Commission to grant an affirmative determination of need for Turkey Point 6 & 7.

Q. Can generation from renewable resources also help reduce GHG emissions?

A. Only some forms of renewables are non-GHG emitting. Furthermore, as Mr. Reed indicates, despite FPL's continued commitment to renewable generation discussed in my testimony and that of Ms. McBee, there is no credible evidence that would lead a reasonable person to conclude that there will be sufficient new generation from non-emitting renewable resources to reliably meet more than a fraction of the projected growth in electricity demand in Florida, let alone replace any existing generation that emits GHG, especially because other non-emitting renewable resources like wind and solar are intermittent and cannot be counted upon to provide firm generation capacity. Therefore, while FPL agrees that it is important that the role of cost-effective renewable resources be increased, and has sought additional renewable

resources in the market, it is equally important to emphasize that load growth in Florida is such that there will be more than enough "room" for the most optimistic of estimates regarding the future contribution of renewable resources, even with the addition of new nuclear generation. In short, FPL's effort to obtain or develop additional renewable resources does not reduce the importance of adding Turkey Point 6 & 7 to FPL's system. There is an important role for both in meeting the future electricity needs of Floridians.

Q. How does nuclear generation compare with solar generation and wind generation regarding their effectiveness in reducing GHG emissions?

A. If we compare the effect on system GHG emissions of adding the same number of megawatts, nuclear generation would be much more effective in reducing system GHG emissions than either solar or wind generation. This is because the nuclear facility would operate at a very high capacity factor, while the solar plant and the wind turbine would operate at relatively modest capacity factors.

Consider if FPL added 2,200 MW of new nuclear baseload generation and that facility operates at 90% capacity factor, it will generate about 17,345 GWh of electricity per year. Comparably sized solar or wind facilities operating at a maximum capacity factor 20% in Florida would generate only about 3,854 GWh, about 13,490 GWh less than the new nuclear units. Based on these capacity factors, new nuclear baseload generation would reduce about 4.5 times the amount of GHG reduced by addition of the same

megawatts of solar or wind generation. Stated another way, one would have to add solar or wind generation that is 4.5 times the size of nuclear generation, at a much greater total cost, in order to achieve the same reduction in GHG emissions. Thus, of the types of non-emitting generation, new nuclear generation is by far the most important option in helping to achieve a meaningful reduction in GHG emissions on a capacity (MW) basis.

Alternately, if compared on an energy (MWh) basis, nuclear generation provides the same GHG reduction benefit as solar and wind generation, but much more economically and more reliably.

Q. Is the addition of Turkey Point 6 & 7 needed, and is it the best alternative to be added in 2018 and 2020, to maintain system reliability?

A. Yes. Turkey Point 6 & 7 is needed to provide system reliability by helping FPL preserve fuel diversity, as well as maintain an adequate level of generation capacity reserve margin in 2018 and 2020. The addition of Turkey Point 6 & 7 was selected to meet FPL's needs in 2018 and 2020 because it was determined to be the best available resource option. Adding Turkey Point 6 & 7 provides the best means of maintaining fuel diversity in FPL's system. In addition, Turkey Point 6 & 7 is much more effective in reducing all system air emissions, including GHG emissions, than all other generation alternatives, including renewable resources. Moreover, FPL found that the addition of Turkey Point 6 & 7 can provide to FPL's customers all these benefits at a competitive cost, that its reliability would be as good as that of a combined

cycle unit and far better than that of IGCC, and that it has by far the lowest and most stable fuel costs of any generation technology. Based on these findings, FPL has concluded that Turkey Point 6 & 7 is by far the best choice to meet the resource needs of its customers in 2018 and 2020.

SECTION 7 – SUMMARY OF BENEFITS PROVIDED BY FPL's EXISTING NUCLEAR UNITS

Q. Please summarize FPL's experience operating nuclear units.

A. As Mr. Stall testifies, FPL has successfully and safely operated four nuclear units at two nuclear generating stations beginning with the in-service date of Turkey Point Unit 3 in 1972. During that time, FPL's four nuclear units have produced more than 593 million MWh of electricity, which is equivalent to the energy used by all of FPL's four million-plus customers for more than five years.

Q. What fossil fuel savings have FPL's four nuclear units achieved?

A. FPL's use of nuclear generation has economically displaced significant quantities of fuel oil and natural gas. As Mr. Yupp explains, because nuclear fuel costs so much less than fuel oil and natural gas, between January 2000 and July 2007 alone, FPL's nuclear generation has saved FPL's customers approximately $8.7 billion in fuel costs.

Q. What environmental benefits have been provided by FPL's nuclear units?

A. FPL's nuclear units produce zero emissions of SO_2, NO_x, particulate matter, mercury and CO_2 during operation. Therefore, as Mr. Kosky explains, compared to the emissions that would have occurred if FPL's nuclear units had been replaced with generation produced by natural gas, the cleanest of the fossil fuels, in 2006 alone FPL's nuclear units have prevented the emission of 20,100 tons of SO_2, 20,400 tons of NO_x, and 15,282,100 tons of CO_2. Thus, the enormous cost savings and reliability benefits of nuclear generation have been achieved with no adverse emissions impact. In fact, in 2006 FPL's nuclear units reduced overall emissions by 27%.

In summary, FPL's nuclear generating units have had the lowest fuel cost and best environmental performance of all of FPL's generating units, an excellent record which FPL will continue and expand with the addition of Turkey Point 6 & 7.

SECTION 8 – ADVERSE CONSEQUENCES

Q. Would there be any adverse consequences to FPL and its customers if the Commission were not to grant an affirmative determination of need for Turkey Point 6 & 7 in this proceeding?

A. Yes. If a determination of need for Turkey Point 6 & 7 were not granted in this proceeding, FPL would be effectively prevented from pursuing the development of new nuclear baseload generation for the next decade. Taken

together with the Commission's recent decision to deny FPL's application to construct new coal-fired baseload units in FPSC Docket No.070098, FPL's customers would face significant adverse consequences related primarily to the reduced system reliability due to significantly lower fuel diversity for the foreseeable future. As indicated in Exhibit RS-2, without the addition of new nuclear generation at Turkey Point 6 & 7, FPL's growing reliance on natural gas would rise to 75% in 2021. This would make it much more difficult to mitigate the effect of any significant interruption in natural gas supplies on FPL's ability to meet the growing electricity needs of its customers. Also, if a determination of need for Turkey Point 6 & 7 is not granted, other Florida utilities may be less likely to pursue any new nuclear generation. As a consequence, not only FPL but the entire state of Florida would become over dependent on natural gas for the majority of its future generation of electricity. In this situation, a gas supply interruption would severely affect electric service reliability throughout Florida.

Such denial of FPL's petition would also eliminate the best, most cost-effective means of reducing GHG emissions in the future, while continuing to meet the future electricity needs of FPL's customers. In fact, denial of FPL's petition would not be in FPL's customers' best interests.

Q. Why would FPL have to increase natural gas use if nuclear generation is not added?

A. As the Commission is well aware, FPL's recent plan to add new baseload coal generation was not approved. Significant uncertainty exists as to whether any other projects that use coal as a fuel, even with IGCC technology, will be approved for the foreseeable future. In any event, the likelihood that significant reductions in GHG emissions will be required in the future raises questions regarding the practical feasibility of coal-fueled additions in Florida until carbon capture and sequestration becomes readily applicable in Florida. Although FPL will actively continue to pursue cost-effective DSM increases and additional generation from renewable resources, currently available information indicates that that these alternatives will make only a modest contribution compared to the projected need for new resources to meet growth in electricity demand based largely on population growth and to replace expiring power purchases from coal generation. Without nuclear generation, the only alternative that can be counted on to provide sufficient new generation capacity to ensure reliable electric service through 2020 is additional natural gas generation.

Q. What is the economic consequence of not approving new nuclear facilities at Turkey Point 6 & 7?

A. From an economic perspective, greater reliance on natural gas is expected to result in higher electricity costs and greater volatility in the cost of electricity. FPL believes that the effort to avoid GHG emissions will result in greater utilization of natural gas throughout the United States and that this general increase in gas utilization will contribute to higher natural gas prices. Without

additional nuclear generation, because a greater portion of electricity would be generated using natural gas, the price of electricity would be more directly affected by the rising price of natural gas. Similarly, any volatility in natural gas prices will translate very directly in volatility in the price of electricity.

If, on the other hand, if Turkey Point 6 & 7 is added to FPL's system, the effect of rising gas prices would be mitigated. If there are any periods of low natural gas prices in the future, because FPL would continue to utilize very large quantities of natural gas, FPL's customers would still benefit greatly from such possible temporary gas price decreases. In other words, there will be more than sufficient natural gas generation in FPL's portfolio even after the addition of Turkey Point 6 & 7 to capture most of the benefit of a possible decrease in natural gas prices in the future; but without the addition of Turkey Point 6 & 7 there would be little protection for FPL's customers when, as is expected, the price of natural gas increases. It is clear from the perspective of both reliability and price volatility that the risks of not adding Turkey Point 6 & 7 to FPL's generation portfolio are enormous.

SUMMARY

Q. Please summarize your testimony.

A. FPL believes that the addition of Turkey Point 6 & 7 is needed to provide reliable service at reasonable cost in the future. This new nuclear generation

project is the only available cost-effective alternative that can contribute to fuel diversity while enabling FPL to maintain an adequate resource reserve margin to meet FPL's customers' projected electricity demand in 2018 and later years, and is in fact the only alternative that can help reduce GHG emissions in FPL's system while continuing to serve a growing customer demand for electricity that will require FPL add 8,350 MW of new resources between 2011 and 2020. In short, this new nuclear generation addition is the most viable and effective resource option that can contribute to achieving recent legislative objectives codified in sections 366.92(1) and 403.519(4), Florida Statutes.

Fuel diversity contributes to greater system reliability because it helps offset reduced availability of one fuel, be it due to supply constraints or transportation interruptions, and helps mitigate the effect of equipment problems that affect one type of generation technology. With the addition of Turkey Point 6 & 7, nuclear generation would be used to produce 26% of the electricity delivered to FPL's customers in 2021. Conversely, without new nuclear generation, by 2021 nuclear fuel would contribute only 16% while natural gas would contribute 75%. The addition of Turkey Point 6 & 7 also contributes to system reliability by maintaining an on-site fuel inventory of 60 days, as a minimum.

Fuel diversity also helps mitigate the effects of price volatility in one or two fuels on the price of electricity. In FPL's system the addition of Turkey Point 6 & 7 provides an effective price hedge against anticipated increases in the price of natural gas.

Although FPL has included renewable resources and DSM as a significant part of its resource mix, and will continue to encourage future renewable development and participation in cost-effective DSM programs, these alternatives cannot by themselves help FPL maintain a balanced, fuel-diverse system nor can they meet the future resource needs of FPL's customers. Furthermore, one would have to add more than 4.5 times the amount of solar or wind generation capacity, at a much greater cost, to achieve the same GHG reduction that will be achieved by the addition of Turkey Point 6 & 7.

Moreover, FPL's analyses show that the addition of Turkey Point 6 & 7 can provide to FPL's customers all these benefits at a cost that is most likely to be lower than that of adding additional gas-fueled generation under almost all conditions, and lower than adding IGCC, and that its reliability would be as good as that of combined cycle generation and far better than that of IGCC.

It is important to note that an affirmative determination of need for Turkey Point 6 & 7 is a first step, not an irreversible decision because FPL and the Commission will periodically review the Project's benefits on behalf of FPL's

customers in light of new information that may be developed over time. However, granting this petition enables FPL to move forward and maintain the ability to bring the benefits of new nuclear generation to its customers in the 2018-2020 time frame – an extremely valuable option given the analysis results obtained for a wide range of future fuel and environmental scenarios – through a commitment of a comparatively modest level of resources. In contrast, denial of FPL's petition will preclude that option.

For these reasons, FPL believes that it is in the interest of its customers that the Commission grant an affirmative determination of need for the addition of Turkey Point 6 & 7, including the associated electric transmission facilities, with target in-service dates of June 2018 and June 2020, respectively, as well as affirmatively determine that FPL would be prudent to make payments for certain long-lead procurement items, and to characterize such payments made prior to completion of the Project's site clearing work as "pre-construction costs."

Q. Does this conclude your direct testimony?

A. Yes.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Florida Power & Light Company's)	Docket No: 070650-EI
Petition to Determine Need for Determine Need for)	
Turkey Point Nuclear Units 6 and 7)	
Electrical Power Plant)	Filed: January 25, 2008

ERRATA SHEET

DIRECT TESTIMONY OF RENE SILVA

PAGE #	LINE #	CORRECTION
15	1	change the word "demand" to "capacity"
	17	change the words "from renewable" to "from purchased renewable"
	22	change the word "agreement" to "agreements"
26	17	change the word "implements" to "implementing"
30	23	insert the word "to" in front of "the extent"
32	13	change the words "such reduced" to "the reduced"
35	2	delete the words "medium or"
45	6	change numbers "20,100" to "22,300", "20,400" to "14,000" and "15,282,100" to "14,369,000"
Exhibit RS-3		change numbers on bar graph from "6 & 9"to "6 & 7"

BY MR. LITCHFIELD:

Q Mr. Silva, would you please summarize your direct testimony for the Commissioners?

A Certainly. Good afternoon, Chairman Carter, Commissioners. Thank you for this opportunity to address you. FPL seeks from the Commission an affirmative determination of need for Turkey Point Units 6 & 7, two nuclear generating units each with a net generating capacity of up to 1,520 megawatts. These units are currently projected to be placed in service by June of 2018 and June of 2020, respectively.

These new baseload generating units are needed to maintain system reliability to serve FPL's customers. In addition, because of their very high projected capacity factors, these units are the only alternative that can significantly contribute to fuel diversity, reduce dependence on natural gas, as well as reduce greenhouse gas emissions while at the same time enable FPL to serve its customers' growing demands in the future.

In considering FPL's petition, I believe that the question before the Commission is not whether FPL should add new nuclear generation or instead add more demand-side management or more renewable generation. FPL must and will continue to pursue all three alternatives because each needs to contribute to reliability, fuel diversity, and emission reductions.

As we focus on that question, it is important to recognize that even with Turkey Point 6 & 7 and the already projected resource additions in the form of new demand-side management, new renewable purchases, and nuclear updates that are included in our filing, FPL still will need as much as 4,000 megawatts of additional resources in this time frame. Our most optimistic expectation of the future availability of cost-effective DSM and renewable resources suggests that they could only make a modest contribution to these 4,000 megawatts of need. Therefore, we believe that even with Turkey Point 6 & 7, some natural gas fuel generation will also have to be added to the system. But without Turkey Point 6 & 7, we would have to add much, much more gas generation.

Therefore, the real choice as we see it for our customers is not between nuclear generation on one side and DSM plus renewables on the other, but rather between a broad combination of Turkey Point 6 & 7, plus additional cost-effective DSM, plus renewable resources, plus some efficient natural gas generation on one side, and an uncertain approach that would consist of perhaps hoping that there would be much more cost-effective DSM and renewables in the future, but, in fact, relying almost exclusively on more and more natural gas generation on the other side.

Clearly, the only sound choice is to proceed with a broad combination of resources that includes Turkey Point 6 & 7

as well as the other alternatives because this strategy will result in greater fuel diversity, lower gas dependence, lower fuel cost volatility, greater system reliability, and reduced greenhouse gas emissions. And, because these benefits of nuclear generation can be achieved at very competitive cost as shown in our analysis.

Only an affirmative determination of need will enable FPL to maintain the ability to bring the benefits of new nuclear generation to its customers by 2018 and 2020. For these reasons, FPL believes it is in the customers' best interest that the Commission grant an affirmative determination of need for Turkey Point 6 & 7 as specified by FPL in its petition. Thank you very much.

CHAIRMAN CARTER: Thank you.

MR. LITCHFIELD: Mr. Silva is available for cross-examination.

CHAIRMAN CARTER: Mr. Beck.

MR. BECK: No questions.

CHAIRMAN CARTER: Mrs. Krasowski.

CROSS EXAMINATION

BY MRS. KRASOWSKI:

Q Hello, Mr. Silva.

A Good afternoon, Mrs. Krasowski.

Q Good afternoon. I guess I will start in with the pages. On Page 15, Line 18, are you familiar with the Ausra

Solar Company?

A I have heard of them, and generally of FPL's plans in discussing possible generation with Ausra, but I'm not directly involved in those discussions.

Q All right. Thank you. So, with Ausra have you done any studying about their steam storage capacity for solar thermal?

A No, I have not. The discussions that have taken place with Ausra in general could probably be best addressed by Ms. McBee.

Q Thank you. On Page 19, Lines 8 through 11.

A I'm there.

Q Where would distributive energy fit into a fuel diverse portfolio?

A To the extent that distributed generation is available and reliable, it would contribute to fuel diversity.

Q Were you here when this was introduced in the public by Mr. Gordon Hanson (phonetic) in the public testimony portion?

A No, I was not in the room.

Q Okay.

A I might add that in terms of the fuel diversity, the distributed generation or whatever type of alternate generation would have to actually produce significant amounts of energy in order to contribute to diversity in our system or in any

system. In our system, because it is so large, it would require a great deal of production of megawatt hours in order to make a significant contribution. But in principle if it is available, and if it runs and generates electricity, and if it doesn't rely on the same fuels that we are otherwise using in our central units, like natural gas, then it could contribute to fuel diversity.

Q Thank you. On Page 20, let's see here, Lines 8 through 10, you speak of fuel transportation and natural gas, and you say that the delivery of a single fuel might be impaired by interruptions and things. And this is particularly true when the generating plants use natural gas because reliable operation of these plants depends on uninterrupted hour-by-hour delivery of natural gas to the plants.

Doesn't a nuclear plant depend on an uninterrupted hour-by-hour delivery of water?

A I'm sure that nuclear -- yes, nuclear generation, like other forms of generation, and I can't think of too many forms, perhaps, other than wind turbines that would not require water. But, what I'm trying to address here is the situation of a challenge to reliability from resources that come from afar that have to be transported through long distance pipelines that are subject to issues like hurricanes and other sources of interruptions. Whereas, water is definitely an issue with every type of generation, and it has been

successfully resolved, but it has never to my knowledge been an issue that affected the reliable operation of any of our plants, including our existing nuclear plants.

Q Mr. Silva, do you have any information on where FPL is planning on drawing the water for the plant from in Miami at the Miami County Commission?

MR. LITCHFIELD: Mr. Chairman, may I interpose an objection here? I think this far exceeds Mr. Silva's testimony, and there are witnesses, I think, who are prepared to testify, and, in fact, have testified in deposition on precisely the water issue. And that would be Mr. Scroggs.

MRS. KRASOWSKI: Thank you.

BY MRS. KRASOWSKI:

Q Mr. Silva, can you tell me what kind of energy are the spent fuel cooling pools run off of at the plant?

MR. LITCHFIELD: Same comment, same objection.

MRS. KRASOWSKI: Thank you.

CHAIRMAN CARTER: Just so we can kind of help the process along, I notice that on the water --

MR. LITCHFIELD: I would suggest either Mr. Stall or Mr. Scroggs. Mr. Stall is up next, perhaps she could try Mr. Stall.

CHAIRMAN CARTER: Okay. Thank you.

MRS. KRASOWSKI: Okay.

BY MRS. KRASOWSKI:

Q Let's see. On Page 22, Line 20, you mention that Mr. Villard in his testimony speaks of reserves, uranium reserves in North America being so large that it is a secure source for fuel. Can you comment on that? Like, can you comment on the grade of the uranium that is found in North America now, or shall I ask Mr. Villard?

A It would be better to ask Mr. Villard about that level of detail.

Q On Page 25, Line 8, the question posed to you is how many megawatts of new and replacement resources does FPL project it will need for the period 2011 through 2020. And you stated previously in your testimony there on Line 10 that FPL projects it will need to add approximately 8,350 megawatts of new replacement sources. Do you still project a 8,350 megawatt need seeing that the state of Florida's growth has slowed?

A Yes, I think that that is an adequate forecast. The information regarding the alleged slowdown in the growth in the state of Florida is not to my knowledge in any way sustained. We have to place this in the context that we are talking in 2008 about a period between 2011 and 2020. What we have done is that we have looked at what the average growth over several cycles of growth in the state have been. And, Doctor Green in particular, who will also testify later, looked at what is a reasonable long-term forecast for growth in Florida.

There may be a month, three months, even perhaps a

year in which growth may not be at the level of the average, but on the other hand there is many other periods in which growth has historically exceeded that. We have to plan for this very long-term, so we have to look at the long run of this forecast. And for this reason, the forecast that we developed only slightly over a year ago does not in our opinion require any adjustment at this time for this planning purpose.

Q Thank you. So, for your demand forecast, did you use the 2006 BEBE (phonetic) Report for the demand forecast?

A I don't know the name, the date of the report. Doctor Green can clearly specify that, but I know that the forecast would have been developed and finalized in the latter part of 2006.

Q Thank you. On Page 32, Line 3.

A Did you say Page 32?

Q Yes, please. Line 3. When did Florida Power and Light arrive at the objective of reducing greenhouse gas emissions in the future?

A I don't know that I know a specific date on which I could say we said the objective. We have been addressing the issue, the question of greenhouse gas emissions at least that I can remember since about 2005, and I'm sure not as publicly as has occurred within the last year, but at least from my perspective in the planning basis we were taking into consideration what might be the cost of greenhouse gas

emissions and how to mitigate that cost and that impact since at least 2005.

Q During the Glades County coal plant hearing, did FPL have an objective of reducing greenhouse gas emissions at that time?

A Yes. During the hearing, we cannot take -- at least FPL does not take these individual need petitions individually devoid of everything else that is happening before and after. When we were presenting our case for the FGPP case, we were planning and we indicated in testimony that part of our long-term plan was to add the coal units followed by nuclear units, and that the combination of coal units that were very clean with all the natural gas that we were adding, and the renewables, and DSM, and the nuclear would follow would, in fact, effectively address and mitigate the impact of greenhouse gas emissions. So we were thinking about that and it was all part of the overall plan.

Q Can you refresh my memory of what part of the needs determination that was in the Glades County plant needs determination petition?

A In the analysis that we prepared -- on the economic analysis that we prepared that reflected the impact, the economic impact of greenhouse gases, we ran our cases with the assumption, with the projection that nuclear units would be added to the system in 2018 and 2020. So we incorporated that.

And back then, this effort to add nuclear generation to our system dates back a number of years. It was being done in parallel with the coal project and the concept that we presented to the Commission in testimony to explain our position and a strategy with respect to emissions and greenhouse gases was incorporating the entire overall plan. We said we are doing well with natural gas, we are going to add the coal, and as part of the entire plan long-term, we are going to also add nuclear. Obviously, the focus of the need determination was on FGPP at the time and on the impact of FGPP, but we were addressing the concept longer term including the nuclear unit in later years.

Q Thank you. As an intervenor in that case, I do not recall that being in the needs determination petition.

A I did not say that it was in the petition. I said that it was presented in testimony and in response, I believe, to cross-examination, but certainly in testimony.

Q Thank you. Let's see. On Page 32, again, Lines 10 through 18. Doesn't having Turkey Point Reactors 6 and 7 and the investment that is going to be required to put into them stifle the development of other energy producing options?

A No. As we have indicated, we are pursuing demand-side management alternatives and we are pursuing renewable generation, so one is not really affecting adversely the other efforts.

Q Would Florida Power and Light consider some sort of cost-recovery for developing alternative and distributive energy?

MR. LITCHFIELD: May I ask to have the question restated?

MRS. KRASOWSKI: Okay. Let's see. Would Florida Power and Light promote a program that is similar to the cost-recovery of nuclear power plants for distributive energy and development of clean renewable energies similar to the one that we have for nuclear?

MR. LITCHFIELD: I'm not sure that this question is going to elicit anything that is within the scope of this proceeding.

CHAIRMAN CARTER: Okay. Let's move to another issue. I think we are getting far afield here.

MRS. KRASOWSKI: Okay.

BY MRS. KRASOWSKI:

Q On Page 34, Lines 16 through 20, where does the cost of long-term waste disposal and handling come into the cost-effectiveness of this program, of this proposal?

A The costs that were incorporated into the economic analysis include the cost of waste handling, spent fuel storage and disposal. However, for the level of detail, if you want a breakdown of how much each contributes to the total cost, I would suggest you ask the question of Mr. Steve Scroggs.

Q Okay. Thank you. On Page 42, Lines 17 through 21. Has FPL ever investigated medium-sized solar plants distributed throughout its service area to cover the -- let's see, excuse me -- for baseload capacity?

CHAIRMAN CARTER: Do you want to restate your question?

MRS. KRASOWSKI: Yes.

BY MRS. KRASOWSKI:

Q Has Florida Power and Light ever investigated medium-sized solar plants distributed throughout its service area as a means of providing baseload capacity?

A We have investigated solar generation in various forms. Photo voltaic, thermal, and are in current discussions with Ausra and other entities for the development of generation, as Mr. Olivera indicated. We have not become convinced that the capability is there to make that a baseload type of generation, especially in Florida.

We are aware of the benefits of solar generation. FPL Group runs the largest, I believe, solar facility in the world in California. It is in the Mojave Desert, and it runs continuously. In Florida, we know that there is intermittent solar incidence on solar generation, so we are not sure that the facilities have been developed, specifically storage that was discussed earlier that would unable a solar plant to run for baseload.

We are continuing to explore the possibility of solar, but until the baseload capability of that technology is demonstrated, we can't exactly count on it and essentially put our faith in that it will meet the needs of our customers, because it would not be prudent to do so.

Q Thank you. One of your options for providing nuclear power is the Westinghouse AP 1000. Are you aware that the Westinghouse AP 1000 has never been tested with actual nuclear fuel?

MR. LITCHFIELD: Assumes facts not in evidence. And, moreover, I think this is the wrong witness for this question. I am happy to suggest more appropriate witnesses at any point if that would help move things along.

MRS. KRASOWSKI: Okay. Thank you.

BY MRS. KRASOWSKI:

Q On Page 43, Line 4, you describe nuclear power as a non-emitting generation, and I would like to ask where this term -- exactly what this term non-emitting means, and where did this term non-emitting come from?

A Well --

Q Excuse me, what does it mean to you and I will leave it at that?

A As I use it in my testimony, and I am thinking of air emissions, differentiating the impact or the effect that nuclear generation has compared to gas generation, coal

generation, et cetera. And in my sense here is that it does not emit sulfur dioxide, it does not emit nitrous oxide, it does not emit particulates, and it does not emit CO2. So, from the perspective of the reference point that I was using as to how it improves the emission profile of our system, it is essentially a non-emitting facility. That was the way that my statement is meant here.

Q Thank you. Do you know anything about the nuclear fuel cycle and what kind of sulfur dioxide, nitrogen oxide, and CO2, and particulates are emitted during the nuclear fuel cycle and the mining, milling, and enrichment of uranium?

MR. LITCHFIELD: Again, Mr. Chairman, I think we have the wrong witness for this line of questioning. I would suggest Mr. Scroggs.

CHAIRMAN CARTER: Okay. Thank you.

MRS. KRASOWSKI: Okay.

BY MRS. KRASOWSKI:

Q And the last question I have is on -- well, maybe not my last question. The last question I have written down. On Page 44, 43 through 44, and that is Lines 22 through Line 3.

How much less water does a combined cycle gas plant use compared to nuclear, do you know?

A No, I do not.

CHAIRMAN CARTER: I think that is Mr. Scroggs. We talked about that. I think he would the one to ask that.

Is that right, Mr. Litchfield?

MR. LITCHFIELD: I think so.

MRS. KRASOWSKI: Thank you, Mr. Silva.

THE WITNESS: Thank you.

CHAIRMAN CARTER: Thank you. Let me see.

Staff.

MS. FLEMING: No questions.

CHAIRMAN CARTER: Commissioner Skop, you are recognized.

COMMISSIONER SKOP: Thank you, Mr. Chairman. Just a quick question for Mr. Silva.

And, again, I have trouble oftentimes hearing down this far, so I may have misheard what you said. But you did mention that I believe it is FPL Energy has the largest solar array in the United States. I believe that is the SEGS Facility. But I thought I heard you say that that runs continuously, and I was just wanting to make sure that that was your understanding or accurate.

THE WITNESS: That was my understanding, that relative to the intermittent nature of what I anticipate a solar facility would run in Florida, the location of the SEGS Facility runs at a much higher capacity factor. I did state continuously, and I apologize, that is in error.

COMMISSIONER SKOP: Thank you. And, again, it may have been me mishearing that, but, again, thank you for that

clarification.

CHAIRMAN CARTER: Okay. Commissioners.

Mr. Litchfield.

MR. LITCHFIELD: No redirect.

CHAIRMAN CARTER: Thank you so kindly. Thank you, Mr. Silva. You are excused.

THE WITNESS: Thank you, Mr. Chairman.

MR. LITCHFIELD: And we would move Exhibits 17, 18, 19, and 20.

CHAIRMAN CARTER: Commissioners, on your list, Exhibits 17, 18, 19, and 20. Any objections? Without objection, show it done.

(Exhibit Numbers 17 through 20 admitted into the record.)

CHAIRMAN CARTER: Call your next witness.

MR. LITCHFIELD: Mr. Ross will be presenting our next witness, Mr. Stall.

CHAIRMAN CARTER: Let's take a second to get changed out with the new line-up here, and our next witness will be Mr. Stall in one second.

Since we are at a breaking point, Mr. Stall, not because of you, we are just going -- the clock says something different dependent on what side of my face I look at, so when the clock on my left says a quarter of we will reconvene. So we are on recess.

(Recess.)

(Transcript continues in sequence with Volume 3.)

STATE OF FLORIDA)

: CERTIFICATE OF REPORTER

COUNTY OF LEON)

I, JANE FAUROT, RPR, Chief, Hearing Reporter Services Section, FPSC Division of Commission Clerk, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 31st day of January, 2008.

JANE FAUROT, RPR
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