



R. Wade Litchfield  
 Vice President and  
 Associate General Counsel - Regulatory  
 Florida Authorized House Counsel  
 Admitted: NY, LA  
 Florida Power & Light Company  
 700 Universe Boulevard  
 Juno Beach, FL 33408-0420  
 (561) 691-7101  
 (561) 691-7135 (Facsimile)

September 17, 2007

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Ms. Blanca S. Bayó, Director  
 Division of Commission Clerk  
 And Administrative Services  
 Florida Public Service Commission  
 2540 Shumard Oak Boulevard  
 Tallahassee, FL 32399-0850

Re: **Docket No. 07 0602 -EI**  
*In re: Florida Power & Light Company's Petition to Determine Need for  
 Expansion of Electrical Power Plants and for Exemption from Rule 25-  
 22.082, F.A.C.*

Dear Ms. Bayó:

Enclosed for filing on behalf of Florida Power & Light Company ("FPL") are the original and fifteen (15) copies of (i) FPL's Petition to Determine Need for Expansion of Electrical Power Plants and for Exemption from Rule 25-22.082, F.A.C. and (ii) testimony and exhibits for the following: (1) Leonardo E. Green; (2) Stephen T. Hale; (3) Kennard F. Kosky; (4) Kim Ousdahl; (5) Steven R. Sim; (6) J.A. Stall; (7) Claude A. Villard; and (8) Gerard J. Yupp.

Also included in this submittal is a computer diskette containing FPL's Petition in Word format. Please contact me if you or your Staff has any questions regarding this filing.

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- COM 5
- CTR 1
- ECR CD
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RWL/jmd  
 Enclosures

Sincerely,

R. Wade Litchfield

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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In re: Florida Power & Light Company's )  
Petition to Determine Need for Expansion )  
of Electrical Power Plants and for )  
Exemption from Rule 25-22.082, F.A.C. )

Docket No. 070602-ET

Dated: September 17, 2007

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COMMISSION  
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**PETITION**

Pursuant to Sections 366.04 and 403.519, Florida Statutes, and Rules 25-22.080, 25-22.081, and 28-106.201, Florida Administrative Code, Florida Power & Light Company ("FPL" or the "Company") petitions this Commission for an affirmative determination of need to expand the electric generating capacity of FPL's existing Turkey Point nuclear power plant ("PTN") and St. Lucie nuclear power plant ("PSL"). FPL also requests that the Commission confirm or grant on an expedited basis an exemption from Rule 25-22.082, F.A.C. (the "Bid Rule") and confirm that the costs of the uprates will be recovered as provided in Section 366.93, Florida Statutes, and Rule 25-6.0423, F.A.C.

**I. Introduction and Overview**

1. FPL owns and operates four nuclear units at two nuclear generating plant sites in Florida: Turkey Point Units 3 and 4, and St. Lucie Units 1 and 2. These units together have operated cleanly, safely, and reliably for more than a combined 125 years. Their operation has saved customers billions of dollars in fuel costs, enhanced fuel diversity, and supported electric system reliability. In doing so, the nuclear units also have prevented the emission of hundreds of millions of tons of carbon dioxide ("CO2") and other greenhouse gasses ("GHG") into the atmosphere.

2. FPL is working to expand its nuclear production. FPL's efforts consist of two parts. First, FPL is proposing to expand the electric generating capacity of its existing nuclear

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units, as discussed in this Petition. Second, FPL intends to propose, in a subsequent petition, two new nuclear-fueled units at FPL's existing Turkey Point site.

3. Capacity expansions at existing nuclear plants are referred to as "uprates." The nuclear uprates proposed by FPL involve major work to all four nuclear units scheduled during separate outages during 2011 and 2012. The PTN uprates will increase the gross power of both PTN units by about 14%. The PSL uprates will increase the gross power of both PSL units by about 11%. Altogether, the nuclear uprates will add about 414 megawatts ("MW") of baseload generating capacity – significant additions to the nuclear powered generating capability of the FPL system.

4. FPL's 2006/2007 resource planning work determined that FPL has future resource needs for 2012 of 490 MW of incremental capacity, or 408 MW at the generator of cost-effective demand site management ("DSM"). The resource needs for 2012 and 2013 combined are 907 MW of incremental capacity or 756 MW of additional cost-effective DSM. All DSM that is known to be cost-effective through 2013 has already been reflected in FPL's 2006/2007 resource planning work. Consequently, in order to meet FPL's summer reserve margin criterion of 20% through 2013, FPL needs new capacity (power plant construction and/or purchases).

5. FPL's economic analyses show that the proposed nuclear uprates are the most cost-effective means of meeting FPL's future capacity needs, maintaining fuel diversity, and reducing CO2 emissions beginning in 2011. Scenario analysis shows an economic advantage for the proposed nuclear uprates in eight of nine scenarios, with the economic advantage ranging from \$122 million (\$2007) in cumulative present value of revenue requirements ("CPVRR") to

\$863 million (\$2007). Moreover, the one case not showing an economic advantage from the uprates results from an unlikely scenario of lower than expected gas costs and environmental compliance costs, and would result in \$33 billion in CPVRR savings for customers on an FPL system-wide basis, due to the large amounts of natural gas used on FPL's system. Thus, FPL expects that customers are highly likely to realize substantial economic benefits through implementation of the proposed nuclear uprates.

6. If the nuclear uprates are approved by the Commission, economic benefits will begin as each uprate is placed into service. Cost savings result from nuclear generation displacing higher-cost fossil fuel generation. Customers will receive all of the benefits of the lower fuel costs that are achieved, and these savings will be reflected in fuel cost recovery clause charges. The uprates are also expected to reduce future capacity costs. Capacity cost reductions occur because the nuclear uprates defer by about one year, and reduce the number of needed MW, of natural gas capacity additions scheduled in the 2014-2017 period.

7. The uprates will decrease reliance on natural gas and oil, improve fuel diversity and contribute to peninsular Florida's energy independence. FPL's analyses show that the nuclear uprates would contribute to FPL's system supplying approximately 19% of its energy with nuclear-fueled energy, rather than 17% if the nuclear uprates are not implemented. Likewise, the nuclear uprates would contribute to FPL's system supplying 65% of its energy with natural gas, as opposed to 67% of energy being fueled from natural gas if the nuclear uprates are not implemented. The additional amount of nuclear energy projected from the

uprates is the equivalent of the annual energy needs of approximately 213,000 residential customers.

8. In addition to meeting electric reliability needs, improving fuel diversity, and the high likelihood of achieving substantial cost savings, the uprates will also result in environmental benefits for customers. The uprates are expected to prevent emission of about 1 million tons per year of CO<sub>2</sub> into the atmosphere. In total, the uprates will prevent emission of about 27 million total tons of CO<sub>2</sub> over their operating lives.

9. FPL requests that the Commission confirm or grant an exemption from the Bid Rule. Section 403.519(4)(c), Florida Statutes, provides an exemption from the Bid Rule for nuclear-fueled electric power plants. Further, in any event, the Bid Rule itself expressly permits a utility to be exempted from its requirements under circumstances such as those presented by these nuclear uprates. Affirming or granting an exemption will make possible lower cost supply of electricity, increase the reliable supply of electricity to the general body of FPL's customers, and serve the public welfare by reducing reliance on natural gas and oil, improving fuel diversity, and avoiding many millions of tons of CO<sub>2</sub> and other emissions. These significant benefits also support granting a need determination and a finding that undertaking the nuclear uprates is prudent and reasonable. No other entity can reasonably be expected to provide 400 MW of non-GHG emitting baseload capacity beginning in the 2012-2013 time period at a cost that results in net savings, not net costs, to customers. FPL requests that the Commission affirm or grant the requested exemption early in this need determination proceeding so that this question is resolved prior to the hearing on FPL's request for a determination of need.

10. The estimated cost of the nuclear uprates, including construction carrying costs, is \$1,798 million (nominal). This substantial new investment in additional nuclear generation in Florida is greatly facilitated by the Florida Legislature's policy of encouraging investment in nuclear generation, embodied in Section 366.93, Florida Statutes, and in the Commission's nuclear cost recovery rule, Rule 25-6.0423, F.A.C. The Commission's timely ongoing review and determination of the prudence of FPL's nuclear uprate expenditures, as well as the cost recovery and rate adjustment provisions contained in the referenced statute and rule, make it possible for FPL to propose this significant and beneficial investment at the earliest feasible point in time. Absent the increased regulatory certainty and cost recovery provisions that have been provided by the Florida Legislature and Commission, FPL would not be encouraged to undertake such capital-intensive nuclear uprates on such an expedited basis. Because of the significance of these cost recovery considerations in FPL's decision to propose the nuclear uprates, and before proceeding with this major investment in additional cost-effective, non-GHG emitting nuclear generation, FPL requests that the Commission confirm that the costs of the uprates will be recovered as provided in Section 366.93 and consistent with the nuclear cost recovery rule, Rule 25-6.0423, F.A.C.

**II. The Primarily Affected Utility (Rule 25-22.081(1)(a))**

11. The Petitioner's name and address are:

Florida Power & Light Company  
9250 West Flagler Street  
Miami, Florida 33174

12. The names and addresses of FPL's representatives to receive communications regarding this docket are:

William G. Walker, III  
Vice President  
Florida Power & Light Company  
215 South Monroe Street  
Suite 810  
Tallahassee, Florida 32301-1859

R. Wade Litchfield  
Vice President and  
Associate General Counsel  
Florida Power & Light Company  
700 Universe Boulevard  
Juno Beach, Florida 33408  
Telephone: 561-691-7101

13. FPL is a Florida corporation with principal offices at 9250 West Flagler Street, Miami, Florida 33174. FPL is a utility as defined in Section 366.82(1), Florida Statutes, and is an applicant as defined in Section 403.503(4) for purposes of Section 403.519, Florida Statutes. FPL is the primarily affected utility within the meaning of Rule 25-22.081, F.A.C.

14. FPL is the largest investor-owned electric utility in Florida and is among the largest in the United States. FPL currently serves more than 4.41 million customer accounts in 35 counties. FPL's service area contains approximately 27,650 square miles within which the population is approximately 8.6 million. Besides being one of the most populous states in the nation, Florida continues to be one of the fastest growing. Over the past decade, FPL added an average of about 85,000 new customers each year.

15. FPL is charged with serving its existing customers, as well as new customers that locate in its service territory. FPL forecasts continued growth of customers in its service territory. The Company is projecting an annual average increase of about 85,000 new customers for the next fifteen years. FPL projects that its annualized retail customer growth will be 2.0% for 2007, 2.1% for 2008, and an average of 1.7% for the succeeding twelve years. In addition to

significant projected customer growth, FPL forecasts significant increases in per-customer electrical load and energy usage. FPL projects that in 2007 FPL's energy use per customer will be 1.9% above 2006, with an increase of 1.7% in 2008, and a compound annual average growth rate of 1.1% thereafter. Combining the growth in customers and the growth in energy use per customer yields a growth in energy sales estimated at 3.9% in 2007, 3.8% in 2008, and then an average of 2.9% for the succeeding thirteen years.

16. In 2007, FPL experienced a coincident peak demand of 21,943 MW (summer) which is 333 MW lower than the all time record peak for FPL's service territory of 22,276 MW experienced in 2005. The winter peak for 2006/2007 was 16,815 MW, well below the all time high winter peak of 2002/2003, which was 20,190 MW. These electric demands reflect the effect of relatively mild weather in 2007 and the continuing impact of the 2005 hurricanes. FPL projects that summer peak demand will grow from 21,943 MW in 2007 to 30,091 MW in 2020, an increase over 2007 of 8,148 MW. Similarly, the winter peak is forecasted to grow from 16,815 MW in the winter of 2006/2007 to 29,308 MW in the winter of 2019/2020, an increase over 2007 of 12,493 MW.

17. FPL is part of a nationwide interconnected power network. FPL is interconnected directly with eight other electric utilities. Multiple points of interconnection enable power to be exchanged among utilities. During 2006, the FPL bulk transmission system was comprised of a total of 6,620 circuit miles of transmission lines. Integration of the generation, transmission and distribution system is achieved through FPL's 542 substations.



### **III. FPL's Resource Mix, Conservation and Clean Energy (Rule 25-22.081(1)(a))**

18. FPL is an industry leader in renewable energy and conservation through DSM, and has one of the cleanest generating fleets in the country. FPL meets its customers' energy needs through a mix of conventional and nuclear generating units, purchased power, including renewable generation, and DSM. FPL's existing generating resources are located at 14 generating sites distributed geographically throughout its service territory, and they also include partial ownership of one unit located in Georgia and two units located in Jacksonville, Florida. In the summer of 2007, FPL's generating facilities totaled approximately 22,123 MW (summer) of capacity and its generating units consisted of 4 nuclear steam units, 3 coal steam units in which it holds partial ownership interests, 12 combined cycle ("CC") units, 17 fossil fuel steam units, 48 combustion turbines and 5 diesel units. In 2006, FPL's fuel mix was as follows: natural gas (50%); nuclear (21%); coal (18%); fuel oil (9%); and other sources (about 2%).

19. FPL presently has long-term Unit Power Sales contracts to purchase up to 931 MW of coal-fired generation from Southern Company. FPL also has long-term contracts with Jacksonville Electric Authority for the purchase of 381 MW (summer) of coal-fired generation from St. John's River Power Park Units One and Two. In addition, FPL has a number of short-term, firm capacity purchased power contracts with a variety of suppliers totaling 943 MW (summer) for 2007. However, in 2015 the UPS contract expires and FPL expects that Internal Revenue Service regulations will require it to stop taking power under the SJRPP contract.

20. FPL has contracts to purchase firm capacity and energy from five cogeneration and small power production facilities totaling 738 MW for 2007. This value decreases to 595

MW in 2011 due to the expiration of several contracts with municipal waste-to-energy facilities. Though analyses are still underway, for purposes of this filing FPL is optimistically assuming that it will be able to extend these three contracts. The current total capacity under contract from the purchases, 143 MW, is assumed to continue through 2026, contributing to a total assumption of 738 MW through 2020.

21. FPL continues to encourage the development of renewable sources of energy in Florida and elsewhere and seeks to enter into contracts with renewable energy suppliers that will benefit FPL's customers. FPL is also working on developing utility-owned wind and solar renewable generation.

22. With respect to DSM, FPL employs comprehensive and cost-effective DSM programs to reduce load requirements and encourage conservation. FPL has long been one of the key innovators in the field of DSM, and is a nationally ranked industry leader in conservation and load management. FPL's programs include both conservation initiatives and load management. FPL's DSM efforts through 2006 have resulted in a cumulative summer peak reduction of approximately 3,659 MW at the generator – or the equivalent of 11 medium-sized power plants – after accounting for reserve margin requirements. The Commission recently approved FPL's proposal to modify seven existing DSM programs and to introduce two new DSM programs. These efforts will result in a projected increase of 564 MW at the generator of additional DSM beyond FPL's Commission-approved DSM Goals.

#### **IV. The Need for the PTN and PSL Nuclear Uprates (Rule 25-22.081(1)(c) and (2)(a))**

23. There is a clear need for the PTN and PSL uprates in order to meet FPL's requirements for new capacity to meet FPL's summer reserve margin criterion. In addition to this reliability need, there is an economic need for many benefits from the PTN and PSL Uprates. There are several aspects to these benefits: (i) the uprates are highly likely to result in large amounts of net savings to customers that will more than pay for their cost; (ii) the uprates will reduce GHG emissions by many millions of tons; (iii) the uprates will improve fuel diversity; (iv) the uprates will enhance fuel supply reliability; and (v) the uprates will improve the balance between generation and load in Southeast Florida.

24. FPL's 2006/2007 resource planning work determined that FPL has future resource needs for 2012 of 490 MW of incremental capacity, or 408 MW at the generator of cost-effective DSM. The resource needs for 2012 and 2013 combined are 907 MW of incremental capacity or 756 MW of additional cost-effective DSM. All DSM that is known to be cost-effective through 2013 already has been reflected in FPL's 2006/2007 resource planning work. Consequently, in order to meet FPL's summer reserve margin criterion of 20% through 2013, FPL needs new capacity (power plant construction and/or purchases).

25. FPL's resource planning work also projects a cumulative capacity need of 6,570 MW through 2020. This large capacity need provides significant opportunities for a wide variety of options – new fossil units, renewable energy options, DSM and other energy efficiency options (such as building standards and appliance standards) and new nuclear units – to play a role in FPL's resource plans.

26. With respect to cost savings for customers, upon being placed into service the PTN and PSL uprates will displace large amounts of higher cost fossil fuel and purchase power generation with additional baseload nuclear generation, resulting in substantial fuel savings that provide a net benefit (i.e., lower system cost) to customers. Total estimated gross fuel savings are reflected in FPL's economic analyses. In addition, customers will benefit from reduced capacity costs due to the deferral effect of the nuclear uprates upon the timing of subsequent units in the 2014-2017 time period, as well as lower capital requirements for subsequent units during this period due to the capacity provided by the nuclear uprates.

27. With respect to GHG reductions, by displacing use of fossil fuels the nuclear uprates will cause about 1 million tons per year in reduced CO<sub>2</sub> emissions, totaling about 27 million tons over the expected life of the nuclear uprates. The expected economic value of these reductions, in terms of reduced environmental compliance costs for existing and expected environmental regulations, is reflected in FPL's economic analysis of the effect of the uprates, discussed below.

28. Increasing nuclear generation through the nuclear uprates enhances fuel diversity. During 2006, about 21% of the energy produced by FPL was generated using nuclear fuel. Without the nuclear uprates, due to system growth, the percentage of nuclear-fueled production will decrease to about 17% by 2013 and decline thereafter. In contrast, FPL's analyses show that the nuclear uprates by 2013 would contribute to FPL's system supplying approximately 19% of its energy with nuclear-fueled energy. Likewise, by 2013 the nuclear uprates would contribute to FPL's system supplying 65% of its energy with natural gas, which is lower than the 67% of

energy being fueled from natural gas if the nuclear uprates are not implemented. Thus, the nuclear uprates clearly contribute to improving and maintaining FPL's fuel diversity as well as decreasing reliance on natural gas as a fuel for electric generation. This increase in annual nuclear generation from the uprates is equivalent to the annual energy needs of approximately 213,000 residential customers.

29. Increasing nuclear generation through the nuclear uprates also reduces the risk of fuel supply interruptions to the economic benefit of customers. This is because nuclear generation is not dependent upon the availability of other fuels, such as natural gas in the event of natural gas production or transportation interruptions, like those production interruptions that occurred after hurricanes in the Gulf of Mexico during recent years. The diversification of fuel type, technology type and transportation method enhances reliability for FPL's customers.

30. In the course of its 2007/2008 cycle of resource planning work, FPL evaluated accelerating the construction of a natural gas combined cycle generating unit into 2011 that otherwise might be added to meet capacity needs in 2012 and 2013. Analysis showed that acceleration would decrease customers' fuel costs and FPL's system GHG emissions, due to the efficiency of the unit. In the event that such a re-sequencing of capacity additions was to occur, the nuclear uprates would serve their intended system reliability purposes while displacing and deferring other new natural gas-fired generation that would otherwise be projected to be built in 2014-2017. For completeness purposes, FPL's resource planning scenarios prepared for this Petition assumed the acceleration of the natural gas unit into 2011. FPL's analysis shows that

the acceleration slightly increases the economic benefit of the nuclear uprates to customers compared with not accelerating the unit.

31. In summary, the proposed PTN and PSL nuclear uprates are needed and expected to produce adequate electricity at a reasonable cost, improve system efficiency, and maintain system reliability, as well as improve fuel diversity, decrease reliance on oil and natural gas, and reduce GHG and other emissions.

#### **V. The Proposed PTN and PSL Nuclear Uprates (Rule 25-22.081(1)(b) and (2)(b))**

32. Upon an affirmative determination of need by this Commission, FPL proposes to commence the process of licensing, installing and operating major uprates at its existing Turkey Point and St. Lucie nuclear plants. The nuclear uprates will represent a large investment in Florida, with significant positive impacts on the provision of clean, cost-effective, reliable energy to FPL's customers.

33. PTN and PSL nuclear uprates will be achieved through major plant modifications that will increase the gross power at PTN and PSL by approximately 14% and 11%, respectively. In order to make more electricity from the greater amount of steam flow, FPL will install major modifications to the units' turbines and main generators, as well as install necessary support and control systems. The uprates will require no changes to the footprints of the existing plants and will have no significant adverse environmental impacts.

34. The nuclear uprates proposed by FPL involve major work to all four nuclear units scheduled during separate outages during 2011 and 2012. At PTN, each unit is expected to

increase gross power by about 14%. Net electrical generation per unit is expected to increase from approximately 700 MW to approximately 804 MW, for a two-unit total of about 208 MW. At PSL, each unit is expected to increase gross power by about 11%. Net electrical generation per unit is expected to increase from about 840 MW to about 943 MW, for a two-unit total of 206 MW. The total MW of the PTN and PSL nuclear uprates is about 414 MW.

35. In order to increase reactor power, FPL is required to obtain prior NRC approval in the form of license amendments for each nuclear unit. FPL plans to submit license amendment applications to the Nuclear Regulatory Commission ("NRC") in January 2009. The NRC will complete a thorough safety and environmental review to assess whether the Company can accomplish the uprates safely and reliably. FPL expects, but cannot be assured of, NRC approval for the PTN and PSL uprates in the Spring of 2010.

36. The estimated nominal costs for the PTN and PSL uprates, not including construction carrying costs, are approximately \$750 million and \$651 million, respectively. The costs of changes to the transmission system that are needed in order to support the Projects are estimated at \$45 million. As discussed below, upon operation the PTN and PSL uprates will displace generation from higher-cost fossil fuels, producing substantial savings at a net present value benefit to customers. The annualized base revenue requirement for the first twelve months of operation for each of the PTN and PSL uprates are, in the order the uprated units will go into service, as follows: PSL Unit 1, \$59.8 million; PTN Unit 3, \$76.4 million; PSL Unit 2, \$61.8 million; and PTN Unit 4, \$72.9 million. A customer bill impact of \$0.34 to \$1.79 per 1000 kWh is projected for the 2009-2012 time frame under a relatively conservative scenario. For the same

scenario, a customer bill impact of \$0.21 per 1000 kWh is projected for 2013, the first full year of operation of all the uprates, reflecting projected fuel savings due to the uprates.

37. FPL has significant power uprate experience in that it has completed successful uprate projects at the four FPL nuclear units in Florida. In addition, the PTN and PSL uprate projects will be staffed by a core team that successfully completed the technical work and obtained the NRC approval for the Seabrook Station Power Uprate in 2006. This same team also obtained NRC approval for renewals of the operating licenses for PTN and PSL. All required regulatory approvals were obtained for these projects, which were all completed on schedule and under budget.

38. Although FPL is targeting completion of the work during separate outages during 2011 and 2012, this is an aggressive schedule, the achievement of which will depend on a number of factors including timely NRC and other regulatory approvals and the receipt of necessary materials and equipment from FPL's vendors and contractors. Delays in obtaining the requisite approvals or equipment and materials could adversely affect the project schedule.

## **VI. Generating and Non-Generating Alternatives (Rule 25-22.081(1)(d) and (1)(e))**

39. In order to fully evaluate the system impacts of the nuclear uprates, FPL developed a long-term resource plan that included the uprates. This resource plan is referred to as the Plan with Nuclear Uprates. In addition, FPL developed an alternate resource plan not including the nuclear uprates that could be used in comparative analyses. This alternate plan is referred to as the Plan without Nuclear Uprates. In summary, FPL's analysis showed that in



eight of the nine economic scenarios comparing the generating technology choices represented in the scenarios, the Plan with Nuclear Uprates was the economic winner. In addition to being the economic winning plan, the Plan with Nuclear Uprates also has the environmental benefits of avoiding GHG and other emissions, enhancing fuel diversity, decreasing reliance on natural gas, and other positive attributes described in this Petition. A description of FPL's economic generating alternative analyses and results follows.

40. When comparing generating technologies that use different fuels, i.e. nuclear units and natural gas units, it is appropriate that different fuel cost forecasts be utilized in order to determine the relative economics between the technologies. In this way, the analyses can address the uncertainty that exists regarding fuel costs, particularly in regard to the future cost differential between natural gas and nuclear fuel. Accordingly, FPL developed a representative range of different fuel forecasts for use in its economic analyses of alternatives.

41. Just as there is uncertainty with respect to the future cost of fuels, there is uncertainty concerning future environmental regulations and the costs of complying with those regulations. When comparing generating technologies that burn different fuels and have different emission profiles, such as is the case with nuclear and natural gas units, the future environmental regulations will determine how the differences in the emission profiles of the generating technologies will affect the relative cost of the technologies. Therefore, FPL found it appropriate to conduct its analyses using different environmental compliance cost forecasts to address emissions.

42. FPL's economic analysis also addresses total system costs for the FPL system, including all fixed and variable costs, upstream gas costs and cost of capital impacts, for the Plan with Nuclear Uprates and the Plan without Nuclear Uprates. In total, FPL analyzed nine fuel cost and environmental compliance cost scenarios that all included FPL's total system costs. FPL's analyses show that the Plan with Nuclear Uprates has a lower CPVRR cost in eight of the nine scenarios of fuel forecasts and environmental compliance cost forecasts. The CPVRR savings of the Plan with Nuclear Uprates compared to the Plan without Nuclear Uprates in the referenced eight of the nine scenarios ranged from a low of \$122 million CPVRR savings to a high of \$863 million, with seven of the eight scenarios resulting in CPVRR savings of greater than \$200 million. Moreover, the one case not showing an economic advantage from the uprates results from an unlikely scenario of lower than expected gas costs and environmental compliance costs, and would result in \$33 billion in CPVRR savings for customers on an FPL system-wide basis, due to the large amounts of natural gas used on FPL's system.

43. Based upon FPL's analysis, it is clear that the Plan with Nuclear Uprates is highly likely to result in net CPVRR savings for customers. This means that the Plan with Nuclear Uprates is expected to deliver clean, non-GHG emitting generation for many years to customers ultimately at a net saving, not a net cost, to customers.

44. FPL employs comprehensive and cost-effective DSM programs to reduce load requirements and encourage conservation. FPL has long been one of the key innovators in the field of DSM, and is a nationally ranked industry leader in conservation and load management.

Without its DSM, FPL would require far more additional capacity to meet its present and projected needs.

45. FPL's forecasted need already accounts for all known, cost-effective DSM that can reasonably be achieved in this time frame. Additional conservation measures cannot be implemented to eliminate the need for the PTN and PSL uprates. An attempt to avoid the PTN and PSL uprates using conservation measures would increase reliance on fossil fuels. Conversely, the PTN and PSL uprates will replace fossil fuel generation and reduce emissions.

46. FPL will also continue to encourage and itself pursue development of cost-effective renewable resources. During 2007, FPL issued a request for proposals for renewable energy, which FPL is hopeful will result in contracts for up to an additional 144 MW of renewable generating firm capacity and up to 100 MW of non-firm capacity and energy from the five bidders. Regardless, there is not enough potential generation from renewable fuels at this time to eliminate the economic and socio-economic need for the PTN and PSL uprates, particularly considering that nuclear units operate as baseload capacity, whereas only a relatively small percentage of renewables is able to do so. In fact, FPL's analyses have already accounted for the additional 144 MW of firm capacity in its capacity need projections.

## **VII. Adverse Consequences of Delay in Approval (Rule 25-22.081(1)(f))**

47. The fuel savings benefits are premised on completion of the PTN and PSL uprates in 2011 and 2012 as planned. However, as noted, the proposed schedule for completing the uprates is aggressive. Delays in obtaining NRC or other regulatory approvals, or equipment

vendor or other contractor-related delays, could result in a later implementation schedule. The benefits of the PTN and PSL uprates will be delayed to the extent the uprates themselves are delayed. Accordingly, to enable FPL to move forward on a timely basis with these projects, FPL requests that the Commission expeditiously approve FPL's proposed uprates. If the uprates are not approved on a timely basis, and the necessary equipment purchases and other contracting measures therefore not undertaken, FPL will be unable to implement the uprates during the planned outages, thus eliminating or at best delaying substantial cost savings, fuel diversity benefits, and CO2 emission reductions for customers.

#### **VIII. Discussions With Other Utilities Regarding Ownership (Rule 25-22.081(2)(d))**

48. FPL owns 100% of the PTN plant, which consists of two nuclear steam units located in Florida City, Florida. The units are baseload units fueled with enriched uranium, and the plant currently generates 1386 MW (summer). The PSL plant consists of two nuclear steam units located in Hutchinson Island, Florida. They are also baseload units fueled with enriched uranium. FPL owns 100% of PSL Unit 1 and 85.1% of PSL Unit 2. FPL's share of the PSL plant currently generates 1553 MW (summer). The co-owners of PSL Unit 2 will have the option to take their pro-rata share of the power generated from the PSL uprate, which will be 14.9%, or approximately 15 MW.

## **IX. The PTN and PSL Uprates Are Exempt from the Commission's Bid Rule**

49. The legislature's policy of encouraging investment in nuclear generation, embodied in Section 366.93 as discussed below, also gave rise to significant amendments to the Florida Power Plant Siting Act ("PPSA"). One such amendment was Section 403.519(4)(c), which renders the Bid Rule inapplicable to electrical power plants using nuclear materials as fuel, sited under the PPSA. Accordingly, so that this question is resolved prior to the hearing on FPL's request for a determination of need, FPL requests that the Commission, on an expedited basis, confirm that the Bid Rule is inapplicable to the nuclear uprates, or alternatively, grant an exemption from the requirements of Rule 25-22.082, for the reasons set forth herein.

50. Even putting aside the statutory exemption under Section 403.519(4)(c), Rule 25-22.082(18) itself permits a utility to be exempted from compliance with any part or all of the Bid Rule if the utility demonstrates that its proposal "will likely result in a lower cost supply of electricity to the utility's general body of ratepayers, increase the reliable supply of electricity to the utility's general body of ratepayers, or otherwise will serve the public welfare." *Id.* While satisfying any one of these criteria is legally sufficient to support granting an exemption, the PTN and PSL uprates satisfy all three elements of the Bid Rule's exemption provision.

51. FPL's proposed PTN and PSL uprates will result in significant fuel savings from additional nuclear power at a net savings, not cost, to customers. This unique characteristic of the PTN and PSL uprates means that no entity offering a supply-side generation alternative can likely propose a lower cost alternative for the same amount of power in this time frame, and certainly not from a source without emissions, such as nuclear generation. Issuing a request for

proposals ("RFP), therefore, is unnecessary. The PTN and PSL uprates, by virtue of the net savings benefits that likely will be achieved, are the lowest cost supply of electricity for FPL's customers. Further, the PTN and PSL uprates will increase the reliable supply of baseload power. The public welfare will also be served by reducing the reliance on fossil fuel resources and providing additional needed capacity with zero GHG emissions. All elements of the Bid Rule exemption provision, therefore, are satisfied by the PTN and PSL uprates.

52. In addition, any RFP process would delay the PTN and PSL uprates to the detriment of customers. Such a delay, as explained above, would delay the fuel-savings benefits to customers, and delay the system-wide reduction in emissions. The time required to conduct an RFP would make it impracticable to implement the uprates during the scheduled 2011 and 2012 planned refueling outages. Thus, it is in the public interest for the Commission to approve FPL moving forward with the PTN and PSL uprates without the delay of an RFP.

53. In summary, the PTN and PSL uprates should be found by the Commission to be exempt from the requirements of the Bid Rule under Section 403.519(4)(c) or, alternatively, pursuant to Rule 25-22.082(18). The risk of losing significant fuel savings and other benefits if the PTN and PSL uprates are delayed for an RFP process far outweighs any benefit from rote compliance with the Bid Rule with no hope of another alternative that provides benefits comparable to those that the PTN and PSL uprates provide. This exemption would also be consistent with Commission precedent, as Progress Energy Florida was recently granted an exemption from the Bid Rule to commence a nuclear uprate project. In re: Petition for

Determination of Need for Expansion of Crystal River 3 Nuclear Power Plant, Order No. PSC-07-0119-FOF-EI, Docket No. 060642-EI, 2007 Fla. PUC Lexis 77, \*9 (Feb. 8, 2007).

**X. Request for Finding of Prudence and Confirmation Of Cost Recovery Treatment**

54. FPL believes that the decision to implement the PTN and PSL uprates is in the long-term interest of its customers. But the investment necessary to realize the benefits of the PTN and PSL uprates is significant. Prior to undertaking the PTN and PSL uprates and in conjunction with this request for a determination of need, FPL requests that the Commission determine that FPL's decision to undertake the proposed uprates is reasonable and prudent.

55. FPL also requests that, in connection with granting a need determination, the Commission confirm that it: (a) will provide for annual reviews and determination of the prudence of the nuclear uprate costs, and recovery of costs, as provided for in the Commission's nuclear power plant cost recovery rule, Rule 25-6.0423; and (b) will affirm that after the uprates are placed in commercial service, FPL will be allowed to increase its base rate charges by the projected annual revenue requirements associated with the uprates in the manner provided for in Section 366.93, Florida Statutes and Rule 25-6.0423.

56. The Commission's confirmation of the application of Section 366.93 and Rule 25-6.0423 plays an essential role in FPL's decision to pursue development of more than 400 MW of cost-effective, non-GHG-emitting nuclear generation in a time frame where it would not otherwise occur. The Commission's timely ongoing review and determination of the prudence of FPL's nuclear uprate expenditures, as well as the interim cost recovery and base rate

adjustment provisions contained in Section 366.93, Florida Statutes and Rule 25-6.0423, provide an appropriate regulatory framework within which FPL is encouraged to undertake this significant and beneficial investment at the earliest feasible point in time. Absent the enhanced regulatory certainty and more predictable cost recovery provided for nuclear plant investment by the Florida Legislature and the Commission, FPL would not be encouraged to undertake this capital-intensive nuclear investment on an expedited basis.

57. Under Section 366.93 and Rule 25-6.0423, FPL will file a petition for Commission approval of a base rate increase as each nuclear uprate is placed into service, pursuant to Section 366.93(4) equal to the annualized revenue requirements for the nuclear uprate for the first 12 months of operations, in accordance with Rule 25-6.0423(7). The timing of the base rate increase for each uprate would be implemented in concert with the fuel cost decreases that will begin as each uprate is placed into service.

58. The full benefit of lower fuel costs achieved because of the uprates would flow to customers through lower monthly fuel charges, the savings of which in the aggregate, are expected to more than offset the cost of the uprates and result in many millions of dollars of net economic benefits for customers. The economic benefits to customers are in addition to improved fuel diversity, reductions in the use of natural gas and oil as fuel for electric generation, and the expected prevention of about 27 million tons of CO<sub>2</sub> emissions due to the uprates.

59. The annual review and determination of prudence contemplated in Rule 25-6.0423, as well as both the cost recovery and adjustments to base rates when the uprates are



placed in service, will facilitate the significant additional investment by the Company in clean nuclear generation consistent with the objectives of Section 366.93 and Rule 25-6.0423. In addition, these actions will at least partially mitigate the increased business risk associated with such a large capital expenditure involving the expansion of existing nuclear capacity.

#### **XI. Disputed Issues of Material Fact and Ultimate Facts Alleged**

60. FPL is presently unaware of any disputed issues of material fact affecting this proceeding. In any event, consistent with the requirements of Section 403.519, FPL's filing demonstrates that: (a) the PTN and PSL uprates are needed to provide adequate electricity at reasonable cost, taking into account the need for fuel diversity and supply reliability; (b) the PTN and PSL uprates are the most cost-effective option for providing fuel diverse generation capacity needed by FPL's customers starting in 2011 and 2012; (c) there is no reasonably available conservation or other non-generation alternative that would mitigate the need for the PTN and PSL uprates; (d) the circumstances of this matter support a specific determination of the prudence of FPL's decision to proceed with the PTN and PSL uprates, (e) FPL's proposal is appropriately exempt from the requirements of the Bid Rule; and (f) application of Section 366.93 and Rule 25-6.0423 for purposes of recovering the significant costs associated with this investment is appropriate.

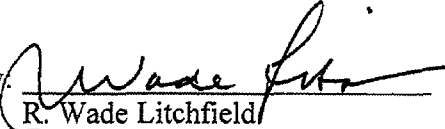
## CONCLUSION

61. FPL seeks an affirmative determination of need and an exemption from all requirements of the Bid Rule for the PTN and PSL uprates. The PTN and PSL uprates are the most cost-effective option available to provide 414 MW of baseload electric generating capacity beginning in 2011 and 2012. That capacity will provide enough energy to meet the annual electricity requirements of 213,000 residential customers, while helping satisfy FPL's future summer reserve margin requirements. The nuclear uprates will do so while providing many millions of dollars of expected fuel cost savings that will directly benefit customers through lower fuel charges. Starting in 2011 and 2012, the PTN and PSL uprates are the most cost-effective option available to the Company. The uprates will provide adequate electricity at a reasonable cost, or in this case at a net savings, through additional nuclear power. No other generation can provide additional power at a net savings to customers with the additional environmental and fuel diversity benefits of the PTN and PSL uprates; therefore, any effort to solicit alternatives will only be futile and delay and reduce the substantial fuel savings benefits of the uprates. The costs to achieve the benefits associated with the proposed expansion of nuclear power on FPL's system are substantial and are recoverable pursuant to Section 366.93 and Rule 25-6.0423, consistent with the Florida Legislature's intent to encourage additional nuclear-fueled generation in the state of Florida. An affirmative determination of need, an exemption from the bid rule, and confirmation of the requested cost recovery, are warranted for the PTN and PSL uprates.

**WHEREFORE**, for the reasons set forth above, and as more fully set forth and described in the supporting testimony and exhibits submitted with this Petition, Florida Power & Light Company respectfully requests that the Commission: (i) grant an affirmative determination of need for the PTN and PSL uprates; (ii) confirm or grant on an expedited basis an exemption from all of the requirements of the Bid Rule (Rule 25-22.082); (iii) confirm that it will provide for annual reviews and determination of the prudence of the Project's costs, and recovery of costs, as provided for in the Commission's Nuclear Power Plant Cost Recovery Rule, Rule 25-6.0423; (iv) confirm that after the nuclear uprates are placed into commercial service, FPL shall be allowed to increase its base rate charges by the projected annual revenue requirements associated with the uprates in the manner provided for in Section 366.93, Florida Statutes and Rule 25-6.0423; and (v) further requests that the Commission grant such additional appropriate relief as the case and law may permit

Respectfully submitted this 17th day of September, 2007.

R. Wade Litchfield  
Mitchell S. Ross  
Bryan S. Anderson  
Jessica A. Cano  
Florida Power & Light Company  
700 Universe Boulevard  
Juno Beach, Florida 33408-0420

By:   
R. Wade Litchfield  
Vice President and  
Associate General Counsel  
Florida Power & Light Company