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By Hand Delivery

Blanca S. Bayó, Director Records and Reporting Florida Public Service Commission 4075 Esplanade Way, Room 110 Tallahassee, Florida 32399-0850

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In Re: Petition for Modification of Florida Power & Light Company's Photovoltaic Research, Development and Education Project Docket No.

Dear Ms. Bayó:

Enclosed for filing on behalf of Florida Power & Light Company ("FPL") are the original and fifteen (15) copies of FPL's Petition for Modification of Florida Power & Light Company's Photovoltaic Research, Development and Education Project.

If you or your Staff have any questions regarding this transmittal, please contact me.

Very truly yours,

Charles A. Guyton

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DOCUMENT NUMBER-DATE

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Florida Power &)	Docket No.
Light Company For Modification of)	
Photovoltaic Research, Development)	Filed: May 10, 2001
and Education Project)	

PETITION FOR MODIFICATION OF FLORIDA POWER & LIGHT COMPANY'S PHOTOVOLTAIC RESEARCH, DEVELOPMENT AND EDUCATION PROJECT

Florida Power & Light Company ("FPL"), pursuant to Section 366.82(2), Florida Statutes (2000), hereby petitions the Florida Public Service Commission ("Commission") to modify FPL'S Photovoltaic Research, Development and Education ("PVRD&E") Project to allow FPL to include in the Project roof top photovoltaic ("PV") systems installed upon commercial, industrial and governmental buildings. The grounds for this Petition are:

Introduction

1. FPL is an investor-owned public utility regulated by the Commission pursuant to Chapter 366, Florida Statutes (2000). FPL is subject to the Florida Energy Efficiency Conservation Act ("FEECA"), Section 366.80-85, 403.519, Florida Statutes (2000). Under FEECA FPL has conservation goals to achieve and has a DSM Plan approved by the Commission. Part of FPL's efforts to achieve its Commission-approved DSM goals include the conduct of research and development projects. FPL's ability to comply with FEECA, achieve its conservation goals and execute its DSM Plan will be affected by the Commission's determination in this proceeding.

2. FPL's address is 9250 West Flagler Street, Miami, FL 33174. Correspondence, notices, orders and other documents concerning this Petition should be sent to:

Charles A. Guyton Steel Hector & Davis LLP Suite 601 215 S. Monroe St. Tallahassee, FL 32301 (850) 222-2300 (voice) (850) 224-7510 (facsimile) William G. Walker, III Vice President, Regulatory Affairs Florida Power & Light Company 9250 W. Flagler Street Miami, FL 33174 (305) 552-4981 (voice) (305) 552-2398 (facsimile)

3. FPL's PVRD&E Project was developed to analyze the feasibility of replacing existing roofing materials with photovoltaic roofing materials. The PVRD&E Project was the outgrowth of a stipulation between FPL and the Legal Environmental Assistance Foundation, Inc. ("LEAF") in the most recent conservation goals proceeding, Docket No. 971004-EG. The PVRD&E Project was approved as part of FPL's DSM Plan on May 8, 2000 in Order No. PSC-00-091-PAA-EG. The Project is more fully described in Appendix A.

Research Project Modification

4. As currently approved, the PVRD&E Project is limited to the installation of PV roof systems on five to ten single family homes. FPL is in the process of arranging the installation of three PV roof systems on single family homes in the Daytona Beach area. At the time FPL entered into its stipulation with LEAF and later when FPL proposed the Project, FPL believed that PV roof top systems were suitable only for residential applications. However, as FPL has learned more about these products, FPL has learned that they may be suitable for commercial, industrial and governmental customers as well. In addition, FPL has found several such

customers who desire to participate in this research effort. Thus, FPL proposes to modify the Project to allow installations on roof tops of commercial, industrial and governmental customers.

- 5. Specifically, two universities, Florida Gulf Coast University ("FGCU") and St. Thomas University have requested to be included in the PVRD&E Project. FGCU, which is located in Ft. Meyers, is planning a "Green Building" to house their environmental department and in which they would conduct not only continuing education classes on energy efficiency products and construction techniques, but also workshops for building code officials and other construction market participants. St. Thomas, which is located in Miami, would also use its system on a roof next to the building where it conducts continuing education programs. With the addition of these two installation sites, there would be a good geographic distribution of PV roof top systems in FPL's service territory.
- 6. Since one of the primary purposes of the PVRD&E Project was to increase local building officials' awareness, understanding and acceptance of the PV roofing technology, FPL believes that modification of the Project to allow installations on commercial, industrial and governmental sites is appropriate. Installation at learning institutions that are highly visible and at which building officials could receive training could enhance the accomplishment of one of the primary purposes of the Project.
- 7. A cost-effectiveness analysis for the PVRD&E Project is not included because research is needed to determine the cost-effectiveness of the installation of the PV roof top systems. However, if the Project demonstrates that PV roof top systems can be offered cost-effectively, then FPL would consider whether and how to add such a measure to the programs in its DSM

Plan. The proposed modification to the Project would not increase the budget of the Project, and FPL does not seek an adjustment to the level of expenditures previously authorized for the Project.

- 8. As the Commission has previously determined, the PVRD&E Project is directly monitorable and will yield measurable results. FPL does not propose to modify its original monitoring plan.
- 9. FPL is not aware of any disputed issues of material facts. FPL has contacted LEAF regarding this proposed modification and LEAF has no objection. There has not been any prior agency action in this proceeding, so FPL cannot allege "when and how the petitioner received notice of the agency decision." FPL received notice of the Commission's approval of the PVRD&E Project by receipt of the order approving the Project, but that action was not in this proceeding. The agency action for which FPL is seeking modification is the Commission's approval of the PVRD&E Project. The statute that FPL contends allows modification of Commission action is Section 366.82, Florida Statutes (2000).
- 10. The proposed modification of FPL's PVRD&E Project to allow roof top installations for commercial, industrial and governmental customers as well as residential customers should be approved. FPL should be authorized to recover through its ECCR clause its reasonable and prudent expenditures for the modified PVRD&E Project.

WHEREFORE, FPL respectfully petitions the Commission to approve FPL's proposed modification to its PVRD&E Project, allow FPL also to make roof top installations for

commercial, industrial and governmental customers, and authorize FPL to recover through its ECCR clause its reasonable and prudent expenditures for the modified PVRD&E Project.

Respectfully submitted,

Steel Hector & Davis LLP Suite 601, 215 S. Monroe St. Tallahassee, FL 32301

Attorneys for Florida Power & Light Company

By: <u>Hanles D. Luyda</u> Charles A. Guyton

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of Florida Power & Light Company's Petition For Modification of Florida Power & Light Company's Photovoltaic Research, Development and Education Project was mailed this 10th day of May, 2001 to the following:

Jack Shreve, Esquire Office of Public Counsel 111 West Madison Street Room 812 Tallahassee, Florida 32399-1400

Charles A. Guyton

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APPENDIX A

Photovoltaic Research Development and Education Project

I. Background

FPL's Photovoltaic Research, Development and Education ("PVRD&E") Project was developed to analyze the feasibility of replacing existing roofing materials with photovoltaic materials. The PVRD&E Project was the outgrowth of a stipulation between FPL and the Legal Environmental Assistance Foundation, Inc. ("LEAF") in the most recent FPL conservation goals proceeding, Docket No. 971004-EG. The PVRD&E Project was submitted to the Commission in FPL's 2000 DSM Plan in December 1999 and was approved on May 8, 2000 in Order No. PSC-00-0915-PAA-EG.

II. Technology

Photovoltaic ("PV") roof-tile systems are a relatively new technology which directly replaces existing roofing materials such as shingles and standing-rib roofing with photovoltaic materials that provide the same water proofing characteristics as conventional roofing materials. One of the primary purposes of the PVRD&E Project was to increase local building officials' awareness, understanding and acceptance of this technology. FPL's research had shown that the uncertainty of such officials about how PV systems operated and how they should be addressed in the building permitting and inspection had created a market barrier for their use.

III. Project Description

In the PVRD&E Project FPL is working with homebuilders to install five to ten PV roof systems in new single family homes. Each roof system will be approximately 2kW (dc) each, resulting in 10 to 20 kW (dc) of PV arrays in total. This research project is designed to:

- Provide data to determine the durability of this technology and its impact on FPL's electric system.
- Collect demand and energy data to better understand the coincidence between PV
 roof tile system output and FPL's system peaks as well as the energy capabilities of
 roof tile PV systems.
- Collect data to assess the homeowner's financial benefit of PV roof tile systems.

FPL will develop and conduct educational workshops for the building departments that are active in FPL's service territory. These workshops will incorporate the results of the above-described FPL PV roof tile research.

IV. Current Status

To date FPL has three residences where this photovoltaic roofing material is being installed. At the time of the approval of the DSM Plan, it was FPL's belief that these roducts were not suitable for the commercial/industrial and government sectors. However, as FPL has have investigated the products, FPL has found roofing materials suitable for these customers. FPL has also found non-residential customers who are very willing to participate in this research effort.

Two universities, Florida Gulf Coast University ("FGUC") and St. Thomas University, have requested that they be included in the PVRD&E Project. In the case of FGUC, they are building a "Green Building" to house their environmental department to conduct continuing education classes to community and industry members on environmental and energy efficient products and construction techniques. Their plans also include education for building code officials, real estate agents and appraisers, financial and insurance agencies. The roof style of the building is an

architectural standing rib roof, and a roofing product exists which bonds to the flat section of the material to provide photovoltaic electricity. This would be a great addition to this teaching facility. The PV roof top system would be seen by all visitors to the center as well as students, and the center will be an attraction for interested parties who wish to replicate this effort.

St. Thomas University has an agricultural plot to built around a Mikosukee Indian Chickee Hut where they also have community continuing education programs. They are building a roof over a nearby irrigation system and would like to use this product to provide energy for their irrigation as well as indirect lighting for classes held in the Chickee Hut.

V. Proposed Change to Project Scope

FPL is requesting that this program be expanded to include residential, commercial, industrial and governmental customers whose roofs are appropriate for this product. FPL and LEAF have agreed to this change. This change will allow FPL to again valuable information on the performance of this technology in the commercial, industrial and governmental sectors. This change will not add any additional cost to the program and will not delay its completion.

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