

APPENDIX 10.10
CLIMATE CHANGE AND FPL'S GREENHOUSE GAS STRATEGY
FPL TURKEY POINT 6 & 7 PROJECT

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Florida Power & Light Company (FPL) is a subsidiary of FPL Group, Inc., nationally known as a high quality, efficient, and customer-driven organization focused on energy-related products and services. FPL Group is a leader in producing electricity from clean and renewable fuels.

FPL Group recognizes that climate change is the most significant environmental issue facing the nation and believes that the threat of major, long-term environmental and economic damage from climate change is real. Because of this, FPL Group has taken a leadership role to address this important issue and the call for action for a national climate change policy. The decision to step into the forefront of this issue goes hand-in-hand with FPL Group's longtime commitment to managing operations with sensitivity to the environment.

Part I of this appendix discusses Florida's emerging climate change policy. Part II highlights specific actions that FPL is taking now in Florida to address climate change and how the Turkey Point 6 & 7 Project is central to FPL's plan for addressing global climate change. The Project will allow FPL to avoid at least 266 million tons of CO₂ emissions over the first 40 years of operations. Part III highlights the multiple alliances that FPL Group has joined to address climate change and its leading role in generating electricity from renewable fuels.

PART I. FLORIDA'S EMERGING CLIMATE CHANGE POLICY

In July 2007, Governor Charlie Crist signed Executive Order 07-127 stating Florida greenhouse gas emission reduction targets as follows: by 2017, reduce greenhouse gas emissions to 2000 levels; by 2025, reduce greenhouse gas emissions to 1990 levels; by 2050, reduce greenhouse gas emissions by 80 percent of the 1990 levels. Governor Crist also signed Executive Order 07-128, establishing a Climate Action Team on Energy and Climate Change to review alternatives for reducing greenhouse gas emissions in Florida. This team issued its Phase 1 report on November 1, 2007. The Climate Action Team and its associated technical work groups published their final report in October 2008. The Action Team's final report provided comprehensive recommendations for the development of greenhouse gas emissions reduction regulations in Florida.

In 2008, the state legislature passed a comprehensive Energy Bill, HB 7135, authorizing the Florida Department of Environmental Protection (FDEP) to establish greenhouse gas reduction rules and allow reimbursement to electric utilities for investments in research and development of carbon

capture and sequestration technologies. The legislation also directs FDEP to establish a cap and trade program to reduce greenhouse gas emissions in accordance with targets established in Executive Order 07-127. The greenhouse gas reduction rules are expected to be adopted sometime in early 2010 for submittal to the state legislature for ratification.

At the direction of the Legislature, the FPSC held a number of rulemaking workshops and submitted a draft rule for legislative consideration that included a target of 20 percent of energy to be generated from renewable sources by January 1, 2021 (as supported by Governor Crist). The Senate introduced legislation during the 2009 legislative session that would implement a Renewable Portfolio Standard (RPS).

PART II. FPL'S COMMITMENT TO REDUCING GREENHOUSE GAS EMISSIONS IN FLORIDA

Consistent with Florida's emerging policy, FPL is committed to addressing global climate change. FPL's plan for addressing climate change has been formulated by considerable experience, including:

- Renewable energy, including significant investments in the construction of solar thermal and solar photovoltaic facilities. FPL is also attempting to obtain siting approvals for a wind power facility in Florida.
- New nuclear generation (Turkey Point Units 6 & 7) at the existing Turkey Point power plant site in south Miami-Dade County and additional generation at two existing nuclear plants (Turkey Point and St. Lucie Power Plants) – which have an impressive record of both clean energy and safety.
- Energy efficiency in electricity generation, continuing to utilize energy-efficient combined cycle natural gas technology to reduce fleet-wide greenhouse gas emissions and use less fuel.
- Power plant modernizations, converting older FPL facilities into cleaner combined-cycle technology.
- Efficiency in electricity usage, where in partnership with FPL customers, FPL realizes cost-effective demand-side reductions in electric usage, particularly at peak times.

NEW NUCLEAR GENERATING CAPACITY IS A CENTRAL FEATURE OF FPL'S COMMITMENT TO ADDRESS GLOBAL CLIMATE CHANGE

Nuclear power is a clean, safe, reliable and affordable energy source that is capable of providing large amounts of electricity to meet Florida's energy needs while producing no greenhouse gases. Using nuclear power means greater energy independence for Floridians, protecting the public and the U.S. economy from being too reliant on any single source of fuel. Nuclear plants have been a proven

power source for FPL customers for more than 30 years. Turkey Point Units 6 & 7 combined will produce an estimated 2,200 MW of electricity – enough to power over 745,000 homes in South Florida. The addition of Units 6 & 7 at Turkey Point will allow FPL to continue to meet the needs of its customers for adequate and reliable electric supply beginning in 2018 (Unit 6) and 2020 (Unit 7).

In addition to providing clean, safe and reliable power for FPL's customers, the Project will result in significant environmental and economic benefits. Adding new nuclear generating capacity will not only help FPL maintain fuel diversity in its generation mix, but will avoid at least 266 million tons of CO₂ emissions over the first 40 years of operation, an average of about seven million tons of CO₂ emissions yearly. That is equivalent to taking approximately 1.3 million cars off the road every year.

FPL RENEWABLE ENERGY ACTIVITIES IN FLORIDA

In an effort to add new renewable energy resources, FPL is actively evaluating and pursuing renewable energy technologies that may be suitable for the state. FPL believes that greater use of cost-effective conservation and renewable resources is good for our customers and the environment and that ongoing evaluation and implementation of emerging clean energy technologies is a necessary pursuit. The following renewable energy activities are underway in Florida:

- FPL is continuing to develop and is actively constructing utility-scale solar projects using both solar photovoltaic and solar thermal technologies throughout the State, helping to provide platforms to refine the technology and reduce its cost. Currently, FPL is building three Next Generation Solar Energy Centers, including the nation's largest photovoltaic solar plant at FPL's DeSoto County property, which will be completed by the end of 2009, and the first "hybrid" energy center at the FPL Martin Plant that will combine solar thermal technology with an existing combined-cycle generation unit. For the latter, FPL has sought and obtained authorization from the FDEP Siting Office to construct the Martin Solar Energy Center (MSEC), which is under construction and will be completed in 2010. This facility will consist of about 200,000 mirrors over about 500 acres at the Martin Plant site. FPL is also preparing to break ground on a large scale solar photovoltaic facility at NASA's Kennedy Space Center that will be completed in 2010, forging a unique public-private partnership with NASA that will leverage engineering, design, and operating expertise. These three solar energy centers combined will generate a total of 223,000 MW-hours annually of electricity from solar energy.
- FPL projects that 50 MW of new renewable capacity will be provided starting in 2014 from FPL's own development efforts, responses to FPL's 2008 Renewable Request for Proposals, and/or unsolicited proposals from renewable energy sources.

- FPL is currently involved in activities to maintain and add renewable resources produced by generators that produce electricity from biomass and municipal waste. As of April 1, 2009, FPL anticipates that a 55 MW renewable purchase contract with Solid Waste Authority of Palm Beach will be extended or otherwise continued.
- FPL is proposing to construct the first wind generation project in Florida on the east coast of Florida at our St. Lucie power plant site. Upon approval, this project will include up to six wind turbines with a capacity of up to 13.8 MW.
- Through alliances with Florida universities, such as Florida Atlantic University, FPL is exploring technologies that produce electricity from ocean current, ocean thermal, and hydrogen commercial technologies.

In another commitment to renewable fuels, FPL has begun replacing select corporate passenger vehicles with hybrid-powered vehicles. FPL also has been at the forefront of a national industry program to develop a line of hybrid trucks capable of running in pure electric or conventional mode, or a combination of both, and has committed to an all-hybrid service fleet as soon as those vehicles become commercially available.

FPL deployed three prototype diesel-electric bucket trucks in 2006, deployed an additional five in 2007, by the end of 2008, added 12 more, and will deploy an additional 42 by June of 2009. These trucks can produce up to 25 kilowatts (kW) of electricity and have reduced the fuel consumption (when compared to a standard gasoline-powered truck in FPL's fleet) by an average of 55 percent. In addition, FPL put into service in September of 2008 the nation's very first plug-in hybrid bucket truck. FPL signed on to become one of Azure Dynamics' "key fleet" partners in the development and testing of hybrid conversion vans.

FPL has been using a B20 biodiesel mix in increasing amounts since 2000. During 2008, FPL used over two million gallons of B20 biodiesel made principally from soybean oil.

FPL CUSTOMER ENERGY CONSERVATION PROGRAMS

FPL is the nation's leader among electric utilities for our partnership with customers in conservation and third in load management (based on 2007 U.S. Department of Energy data, the latest available). Cost-effective conservation and load management programs are integral to helping keep customer rates stable while providing reliable service. To the extent these measures help to reduce FPL's energy requirements, they help reduce overall CO₂ emissions.

Since 1981, more than 5.5 million customers have participated in FPL's industry-leading conservation and energy management programs. For example, more than 2.5 million customers have had a Home Energy Survey and many have participated in multiple programs. FPL's nationally recognized leadership in the implementation of demand side management (DSM) within its system has avoided the need to build the equivalent of 12 mid-sized power plants. The results through year-end 2008 include:

Residential:

- 2,578,683 energy surveys performed;
- 769,167 Building Envelope Program participants;
- 1,175,838 high-efficiency air conditioning program participants;
- 465,333 duct tests and repairs; and
- 772,806 On Call[®] participants.

Business:

- 129,158 energy surveys performed;
- 268 MW of efficient lighting;
- 316 MW of high-efficiency air conditioning/heating; and
- 68 MW of Building Envelope retrofits.

From 1998 through 2008, FPL's investment in customer programs to reduce energy demand will exceed \$1.7 billion. In 2008 alone, FPL invested more than \$137 million on conservation and load management incentives. The company expects that savings from these programs through 2014 will enable us to forego the building of at least another two power plants – in addition to the 12 mid-sized plants we have already avoided constructing due to these efforts.

In July 2007, FPL began offering a new Online Business Energy Evaluation as a quick, easy-to-use, and free way to help business customers control electricity usage. The do-it-yourself interactive energy survey offers practical, energy-saving recommendations customized to each customer's business and building type. Through 2008, there have been 500 Online Business Energy Evaluations completed.

FPL has also embarked upon an initiative to install advanced electronic meters that utilize internet protocol to provide remote meter communications on all customer homes and small businesses. Part of this plan included an initial evaluation phase, which included the installation of 50,000 advanced meters in select customer homes and small businesses in 2007 and an additional 50,000 in 2008.

Pending final successful evaluation of this technology, the remaining residential and small business customers should be receiving “smart meters” in the coming years. The new technology will allow FPL to remotely collect and analyze electricity-related data, help customers be able to better monitor and manage their energy usage, as well as provide opportunities to improve customer services and employee safety. The initiative may also allow FPL to improve its own operating effectiveness in systems planning, load management and increase the ability to identify, and correct electric service issues once the system is fully activated.

Recently, FPL Group, along with the City of Miami, GE, Cisco Systems and Silver Spring Networks, launched *Energy Smart Miami*, a groundbreaking initiative proposed to use federal economic stimulus funds to spur a \$200 million investment in “smart-grid” technology and renewable energy over the next two years. This initiative has the potential to be the most extensive and holistic smart-grid implementation in the country. The backbone of the project will be the deployment of more than one million advanced wireless “smart meters” to every home and most businesses in Miami-Dade County, which will be connected by a two-way wireless network, along with pilot programs involving renewable energy integration, deployment of plug-in hybrid electric vehicles and consumer technology trials of in-home energy displays and home energy controllers. The initiative would help Miami-Dade County consumers save money by better enabling them to choose how they consume and conserve electrical power through advanced wireless smart meters.

THE ROLE OF UTILITIES AND HOW FPL COMPARES

FPL has invested significantly in making its existing Florida power plants more efficient and building new, highly efficient next generation energy centers to meet the current needs of FPL customers and future growth in energy demand. These new energy centers will represent FPL’s sustainable, clean energy commitment and a continued course of a diversified, clean fuel mix.

Electric utilities did not single-handedly create the problem of climate change, nor will FPL be able to solve the problem alone. FPL recognizes that voluntary action, by itself, in the energy industry will not be enough. It is also necessary to ensure that system reliability is maintained and that electricity rates remain stable for utility customers. FPL does not believe the solution is to outlaw certain fuels or to mandate a reduction in electricity usage. Rather, the answer is a combination of solutions, including cost-effective conservation and load management programs, generation from renewable fuels, nuclear and cleaner fossil generation.

FPL'S RECORD OF AIR EMISSIONS REDUCTIONS

Over the past decade, FPL Group has voluntarily made significant reductions in power plant emissions. Today, FPL Group's emission rates of CO₂ are among the lowest of all power generators in the United States. Since 1990, FPL Group has increased generation by an additional 106 million MW-hours, a 223 percent increase while reducing CO₂ emission rates by 30 percent. Since 1990, FPL has increased generation by an additional 47.3 million MW-hours, a 99 percent increase, while reducing CO₂ emission rates by over 10 percent.

FPL is also the nation's leader in converting older power plants to modern highly efficient natural gas operations, which significantly increases the efficiency of the plants and reduces emissions. The conversions of the existing Cape Canaveral and Riviera Power Plants will further exemplify FPL's commitment to environmental sustainability.

FPL'S EXISTING NUCLEAR GENERATION HAS AVOIDED GREENHOUSE GAS EMISSIONS

FPL's generating fleet includes considerable nuclear generating capacity and nuclear additions such as the proposed Turkey Point Units 6 & 7 are planned for the future. The operation of FPL's existing nuclear units has resulted in a significant amount of air emissions being avoided as compared to the same amount of electric generation being produced using fossil fuels.

To place these avoided CO₂ emissions in perspective, it is important to consider the magnitude of such emissions in Florida. FDEP has estimated that in 2003 the CO₂ emissions from all sources in Florida including electrical generation and transportation were about 250 million tons. FPL's nuclear units in 2003 alone avoided an amount equivalent to about six percent of Florida's total CO₂ emissions. Since 1972, FPL's nuclear units' generation has avoided more than 500 million tons of CO₂ emissions in Florida.

FPL Group's overall emissions profile, when all generation facilities are considered, is one of the lowest in the country. Although FPL has one of the cleanest fossil fuel-fired fleets in the nation, FPL's nuclear units have further served to significantly decrease FPL's air emissions profile when all sources of generation are considered.

PART III. FPL GROUP'S COMMITMENT TO ADDRESS GLOBAL CLIMATE CHANGE

In June 2007, FPL Group Chairman and Chief Executive Officer Lew Hay testified before the Senate Committee on Environment and Public Works about how utilities can be part of the solution to the challenge of global warming. On Capitol Hill, he proposed that the simplest and most effective solution that protects the economy:

- Sets a market price for carbon that is reflected in the price of every good and service consumed throughout the economy;
- Applies the cost of carbon to all industry sectors, as well as import and export sensitive industries; and
- Allows companies to avoid the cost of carbon emissions by not emitting carbon, exactly the behavior that FPL wants to encourage.

In January of 2007 FPL Group joined a diverse group of U.S.-based businesses and leading environmental organizations calling on the federal government to quickly enact strong national legislation to address global climate change and achieve significant reductions of greenhouse gas emissions. As a member of the U.S. Climate Action Partnership (USCAP) FPL Group supports the coalition's efforts to establish a U.S. policy framework that includes:

- Mandatory approaches to reduce greenhouse gas emissions from major emitting sectors;
- Flexible approaches to establish a price signal for carbon; and
- Approaches that create incentives and encourage actions by other countries.

In January 2009, USCAP released, and FPL Group supports, their *Blueprint for Legislative Action*. It is a direct response to requests by federal policymakers for a detailed consensus that could help in forming climate change legislation. The *Blueprint* outlines the group's belief that the strongest way to achieve the recommended emission reduction goals is a federal cap-and-trade program coupled with cost containment measures and complementary policies for technology research, development and deployment, clean coal technology deployment, lower-carbon transportation technologies and systems, and improved energy efficiency in buildings, industry and appliances. A copy of the *Blueprint* may be found at: http://www.us-cap.org/pdf/USCAP_Blueprint.pdf.

In 2003, FPL Group was the first electric company to join the Environmental Protection Agency's "Climate Leaders" program. As a participant, FPL Group committed to achieving an 18 percent

reduction in its CO₂ emissions rate, the main greenhouse gas blamed by scientists for warming the Earth by 2008, compared to a 2001 baseline. FPL Group has already achieved and in fact, surpassed that goal, reducing our emissions rate by 21 percent.

FPL Group is also a Pioneer Partner in the World Wildlife Fund's "PowerSwitch[®]" program, which is designed to reduce greenhouse gas emissions through the use of cleaner fuels and more efficient electricity generation. FPL Group has committed to a 15 percent improvement in the efficiency of our power plant fleet by 2020, from a 2000 baseline. This will avoid 27 million tons of CO₂ emissions annually.

What FPL Group is doing out of respect for the environment has not gone unnoticed. In February 2009, FPL Group, for the fifth straight year, was named by Corporate Knights, Inc., a Canadian media company, as one of the most sustainable large corporations in the world. In addition, in September 2007, FPL Group was named "Best in Class" in the prestigious Climate Leadership Index and honored among Fortune 500 companies for our approach to climate change in a report issued by the Carbon Disclosure Project (CDP).

FPL GROUP'S PARTNERS IN ADDRESSING CLIMATE CHANGE

FPL Group has joined multiple alliances to strengthen the call for action on a comprehensive approach to climate change, including the following:

The Climate Group – FPL Group has joined the Climate Group, an independent, nonprofit organization dedicated to advancing business and government leadership on climate change. Proactive companies, states and cities around the world are demonstrating that cuts in greenhouse gases required to stop climate change can be achieved while growing the bottom line.

The Carbon Disclosure Project – The CDP is an independent not-for-profit organization that seeks information on the business risks and opportunities presented by climate change and greenhouse gas emissions data from the world's largest companies. Each year, FPL Group voluntarily provides information to the CDP for disclosure on their website to facilitate the activities of policymakers, consultants, accountants and marketers. CDP has become the gold standard for carbon disclosure methodology and process and is the largest repository of corporate greenhouse gas emissions data in the world.

United States Climate Action Partnership (USCAP) – In January 2007, FPL Group joined a diverse group of United States-based businesses and leading environmental organizations calling upon the federal government to quickly enact mandatory economy-wide legislation to achieve significant reductions of greenhouse gas emissions. USCAP members believe any delay today in action to control emissions increases the risk of unavoidable consequences that could require even steeper reductions in the future.

Global Roundtable on Climate Change – FPL Group has also endorsed the Joint Statement of the Global Roundtable on Climate Change (GROCC). GROCC brings together more than 150 critical stakeholders from all regions of the world – including senior executives from the private sector and leaders of international governmental and non-governmental organizations to discuss and explore areas of consensus regarding core scientific, technological, and economic issues critical to shaping sound public policies on climate change.

The statement lays out a proactive framework for global action to decrease climate change risks and impacts, while also meeting the need for energy, economic growth, and sustainable development around the world. It outlines cost-effective technologies that exist today and others that could be developed and implemented to improve energy efficiency and to help reduce emissions of CO₂ and other greenhouse gases in major sectors of the global economy.

Those endorsing the Joint Statement represent the fields of energy, government, air transport, manufacturing, banking, insurance, technology, religious organizations, and many others.

The Clinton Global Initiative (CGI) – CGI is a non-partisan organization that brings together a community of global leaders from various backgrounds to devise and implement innovative solutions to some of the world's most pressing challenges. The organization is reaching even more leaders in diverse regions, including future leaders from college campuses and global citizens through a community of projects evolving from CGI's unique model that focuses on taking action. FPL Group's Clean Energy 2007 Commitment at the Clinton Global Initiative in September 2007 included a commitment to build new solar generation facilities over the next seven years totaling 300 megawatts in Florida and 500 megawatts in the United States, representing a total capital cost of approximately U.S. \$1.5 billion.

CONCLUSION

FPL Group has taken a leadership role to address climate change and a national climate change policy. The decision to step into the forefront of this issue goes hand-in-hand with FPL Group's longtime commitment to managing operations with sensitivity to the environment.

FPL is taking action now in Florida to address climate change. FPL is the nation's leader among electric utilities for its partnership with customers in conservation and third in load management. FPL's nationally recognized leadership in the implementation of cost-effective conservation and load management programs within its system has avoided the need to build the equivalent of 12 mid-sized power plants. FPL's future generation plans include nuclear uprates at both the Turkey Point and St. Lucie Nuclear plants and two new nuclear generating units (Units 6 & 7) at the Turkey Point Plant. Additional nuclear energy will result in a significant amount of air emissions being avoided as compared to the same amount of electric generation being produced using fossil fuels. Clearly, safe, clean, reliable nuclear generation is a critical component in combating climate change.