

**BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION**

**DOCKET NO. 080677-EI
FLORIDA POWER & LIGHT COMPANY**

**IN RE: PETITION FOR RATE INCREASE BY
FLORIDA POWER & LIGHT COMPANY**

TESTIMONY & EXHIBITS OF:

CHRISTOPHER A. BENNETT

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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF CHRISTOPHER A. BENNETT**

4 **DOCKET NO. 080677-EI**

5

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

7 A. My name is Christopher A. Bennett. My business address is Florida Power &
8 Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408.

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

10 A. I am employed by FPL Group as Executive Vice President & Chief Strategy,
11 Policy & Business Process Improvement Officer.

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

13 A. I am responsible for FPL Group strategic and business improvement
14 initiatives, including environmental services, Six Sigma quality and
15 information technology. For purposes of this testimony, I am addressing
16 those initiatives only as they relate to Florida Power & Light Company
17 ("FPL" or the "Company").

18 **Q. Please describe your educational background and professional
19 experience.**

20 A. I graduated from Princeton University with a B.S.E. degree in Chemical
21 Engineering and earned an M.B.A. from Harvard Business School. Prior to
22 joining FPL Group, I was Vice President and practice leader of Dean &
23 Company, a strategic management consulting company. Prior to that, my

1 experience includes the following positions: Executive Manager of Corporate
2 Business Development for General Electric, Senior Engagement Manager for
3 Mercer Management Consulting, Senior Manufacturing Engineer for Digital
4 Equipment Corporation (now Hewlett-Packard), and Group Leader for New
5 Technology Engineering and Components Production at Intel.

6 **Q. Are you sponsoring any exhibits in this case?**

7 A. Yes. I am sponsoring the following exhibits:

- 8 • CAB-1 - Operating Company CO₂ Emission Rates
- 9 • CAB-2 - Six Sigma DMAIC Process Map

10 **Q. Are you sponsoring or co-sponsoring any Minimum Filing Requirements**
11 **(MFRs) in this case?**

12 A. Yes. I am co-sponsoring the following MFRs:

- 13 • B-15, Property Held for Future Use 13-month Average
- 14 • C-16, Outside Professional Services
- 15 • C-43, Security Costs

16 **Q. What is the purpose of your testimony?**

17 A. The purpose of my testimony is to provide an overview of FPL's initiatives in
18 the areas of environmental management, operational excellence, and
19 information technology. These initiatives have generated a significant amount
20 of cost reductions, productivity improvements, asset protection, and
21 environmental benefits that have resulted in increased value to our customers.
22 In the area of environmental management, I will describe how FPL's
23 environmental leadership and commitment have led to significant emission

1 reductions and strong ecosystem protection. In the area of operational
2 excellence, I will discuss the Six Sigma quality program at FPL and describe
3 how it has resulted in operational efficiencies that have benefited the
4 Company and our customers as well as created a culture of continuous
5 improvement throughout the Company. In the area of information technology,
6 I will describe how improvements in our information systems have created
7 efficiencies and benefits for both the Company and customers.

8 **Q. Please summarize your testimony.**

9 A. Environmental Management is an area of increased importance from a
10 national and global perspective and is an important corporate value at FPL.
11 FPL's power plant emission rates are among the lowest of all power
12 generators in the United States, as illustrated in Exhibit CAB-1. FPL balances
13 the objective of reducing emissions with that of maintaining low customer
14 rates. FPL is deeply engaged in developing policies and deploying renewable
15 energy technologies to address the challenge of global warming. FPL has
16 developed and implemented numerous programs to better manage the
17 environmental performance of our operations while protecting wildlife such as
18 endangered sea turtles, manatees and crocodiles.

19
20 FPL has been a major proponent of efforts to address global climate change.
21 We have led by example by creating the highest-rated customer energy
22 efficiency programs in the U.S. (according to the Department of Energy), and
23 through our investments to modernize older plants, increase nuclear

1 generation, and develop solar generation, we have achieved one of the lowest
2 emissions profiles in the United States electric sector. We have also been a
3 leading advocate in support of Governor Crist's and the legislature's directives
4 to address climate change. FPL's President, Armando J. Olivera, was
5 appointed and actively participated on the Governor's Action Team on Energy
6 and Climate Change. Through this process and by working directly with the
7 Florida Department of Environmental Protection (FDEP), we have been
8 working to build consensus for an effective and principled Florida program to
9 reduce greenhouse gas emissions. FPL supports the Action Team's
10 recommendations which include key components to develop a cap-and-trade
11 system with specific reduction goals.

12

13 FPL is a recognized leader in the area of operational excellence. The
14 Company's comprehensive quality programs and culture of continuous
15 improvement led to FPL being the first company outside of Japan to win the
16 prestigious Deming Prize. Our quality practices have since continued to
17 evolve in scope and capability into a much more rigorous, statistical approach
18 called Six Sigma, a "Best-In-Class" methodology adopted by many of the
19 world's leading quality practitioners that results in breakthrough quality
20 improvements.

21

22 Six Sigma is a disciplined, quantitative, analytic methodology to define and
23 solve complex business problems by examining existing processes,

1 eliminating non-value added work, identifying opportunities for improvement
2 and implementing new measurement systems to monitor and control ongoing
3 performance and quality. The improvements identified have led to
4 operational efficiencies, reduced costs, and improved the customer
5 experience.

6
7 FPL is investing in new IT systems that have improved and will continue to
8 improve FPL's operating effectiveness, reduce cost, improve security and
9 control, enhance service and reliability, and make information more available
10 to our customers, as well as meet increasing legal and regulatory
11 requirements. For example, FPL is investing in upgrading 15 to 20 year old
12 systems and infrastructure which will significantly reduce risk of failure and
13 maintenance cost, increase responsiveness to weather and other events, and
14 provide efficiencies in areas such as work management, asset management,
15 and distribution network management. FPL is also investing in new
16 technologies to enhance customer service and provide customers greater
17 control over their bills and energy consumption. Other key investments have
18 been in the area of cyber security, which provide greater protection over the
19 Company's (and the country's) information and critical physical assets. FPL
20 takes cyber security very seriously, and works closely with various federal
21 agencies and industry groups to influence the regulatory direction in this area.

1 Among the major projects currently under way are: 1) a nuclear fleet-wide
2 Nuclear Asset Management System (NAMS), which will standardize
3 processes, resulting in greater efficiencies and control over our nuclear
4 operations; 2) SAP, an enterprise resource planning system that integrates
5 financial control and reporting, procurement, human resources, accounts
6 payable, and cash management; and 3) a foundational Future Enterprise
7 Network Architecture (FENA) project that increases reliability, speed,
8 security, and quality of our voice and data networks, and reduces risk and cost
9 over the long term. In addition to these three projects, we will soon begin a
10 Customer Information Systems (CIS III) project to upgrade the systems
11 currently used for customer billing, care center operations and all customer
12 information related needs. This project will also enable FPL to support
13 emerging Smart Grid opportunities and requirements.

14
15 Even in the current economic environment, these investments make sense
16 because they will result in operational efficiencies and help reduce ongoing
17 costs, improve customer service, and give greater control to the customer to
18 manage energy consumption. They also will position FPL for even better
19 response to storm and other events, and enhance the Company's cyber
20 security protection. All four of these major projects are in critical areas that
21 benefit our customers, the Company, and the country.

1 ENVIRONMENTAL MANAGEMENT

2

3 **Q. Please describe your responsibilities with regard to environmental**
4 **matters.**

5 A. I am responsible for FPL's Environmental Services. This is an area that has
6 increased in importance from a national and global perspective and is an
7 important corporate value. For years, FPL has built a committed
8 environmental culture throughout the workforce which has established the
9 Company as a leader in environmental management. Through industry
10 leading efforts, FPL has demonstrated a track record of reducing emissions
11 and protecting wildlife and ecosystems. FPL has dedicated resources in our
12 corporate offices and throughout our facilities that manage the execution of
13 FPL's environmental strategy, planning and compliance responsibilities.

14 **Q. What has FPL's performance been with regard to reducing greenhouse**
15 **gas (GHG) emissions and other emissions?**

16 A. FPL's emissions rates of carbon dioxide (CO₂), sulfur dioxide (SO₂) and,
17 nitrogen oxides (NO_x), are among the lowest of all power generators in the
18 United States as shown in Exhibit CAB-1. Air emission regulations are
19 becoming more restrictive, resulting in substantial retrofit costs for many in
20 the electric industry, particularly coal-fired power generators. Recognizing
21 these restrictions, FPL has been pursuing a strategy to add generation from
22 new efficient combined-cycle units and nuclear. This strategy has positioned
23 us well to be able to serve new demand while also complying with more

1 stringent air emission requirements for NO_x, SO₂, as well as emerging
2 regulations on mercury. It also prepares us to be in a better position to address
3 anticipated CO₂ reduction requirements. Of the four investor owned utilities
4 (IOU) in Florida, FPL maintains the lowest emissions of CO₂ and NO_x and
5 second lowest in SO₂. FPL has achieved these low emission rates, while
6 keeping FPL's residential electricity rates the lowest among Florida IOUs.

7

8 Not only does FPL have one of the cleanest fossil fuel-fired fleets in the
9 nation, FPL's nuclear units have significantly decreased FPL's air emissions
10 profile when all sources of generation are considered. FPL's nuclear units
11 have, in effect, reduced emissions across FPL's system by about 30 percent.
12 To place these avoided emissions in perspective, it is important to consider the
13 magnitude of such emissions in Florida. FPL nuclear units avoided more than
14 500 million tons of CO₂ since 1972. This equates to nearly three and a half
15 years of the CO₂ emissions from Florida's entire electric sector. The avoided
16 emissions from FPL's nuclear units are substantial by any measure.

17

18 FPL is a leader in converting older power plants to modern, highly-efficient
19 combined cycle operations, which significantly increases the efficiency of the
20 plants and reduces emissions. The planned modernizations of the existing
21 Cape Canaveral and Riviera Power Plants further exemplify FPL's
22 commitment to environmental sustainability.

1 **Q. Briefly describe FPL’s involvement in addressing Global Climate**
2 **Change.**

3 A. Consistent with Florida’s emerging policy, FPL is doing its part to fight
4 climate change by investing in even cleaner energy. FPL’s plan for
5 addressing climate change has been informed by considerable experience,
6 including:

7

8 • Renewable energy, including significant investments in the
9 construction of solar thermal and photovoltaic facilities. FPL is also
10 attempting to obtain site approval for wind power facilities.

11 • New nuclear generation at the existing Turkey Point power plant site
12 in south Miami-Dade County and additional nuclear generation at two
13 existing nuclear plants (Turkey Point and St. Lucie Power Plants) –
14 which have an impressive record of both clean energy and safety.

15 • Energy efficiency in electricity generation, continuing to utilize
16 energy-efficient combustion turbine technology to reduce fleet-wide
17 greenhouse gas emissions and use less fuel.

18 • Power plant modifications, converting older FPL oil-fired facilities
19 into cleaner combined-cycle technology.

20 • Energy efficiency in electricity usage, where, in partnership with FPL
21 customers, we realize cost-effective demand-side reductions in electric
22 usage, particularly at peak times.

1 In addition, FPL is a strong supporter of a clean energy portfolio standard that
2 will include aggressive targets and minimize cost impacts to customers.

3 **Q. Is FPL currently investing in any renewable resources that help address**
4 **climate change?**

5 A. Yes. FPL is developing several utility scale solar facilities. On July 1, 2008,
6 Governor Crist signed into law House Bill 7135 (HB 7135), which provided
7 an opportunity to demonstrate the feasibility of developing clean, zero
8 greenhouse gas emitting renewable generation in Florida. In accordance with
9 the provisions of HB 7135, FPL is constructing three separate solar energy
10 projects totaling 110 MW with different characteristics, at diverse locations.
11 These projects will not only generate clean, renewable energy, but will also
12 provide significant information and experience regarding key aspects of siting,
13 constructing and operating different solar technologies at various locations in
14 Florida.

15

- 16 • The Martin Next Generation Solar Energy Center (“Martin Solar”)
17 will provide up to 75 MW of solar thermal capacity in an innovative
18 way that directly displaces fossil fuel usage in an existing FPL
19 generating unit. When it is built, Martin Solar will be the second
20 largest solar facility in the world and the largest solar plant of any kind
21 outside of California;

- 1 • The DeSoto Next Generation Solar Energy Center (DeSoto Solar) will
2 provide 25 MW of solar photovoltaic (PV) capacity, making it the
3 nation's largest solar PV facility; and
- 4 • The Space Coast Next Generation Solar Energy Center (Space Coast
5 Solar) will provide 10 MW of solar PV capacity. This innovative
6 public/private partnership with the National Aeronautics and Space
7 Administration (NASA) will allow both entities to leverage
8 engineering, design, and operational expertise and provide
9 unparalleled opportunities to develop and refine solar technology.

10
11 Each one of these facilities is a significant and innovative renewable
12 generating plant in its own right, but collectively these Next Generation Solar
13 Energy Centers will be a landmark achievement. These facilities are expected
14 to produce a total of 213,000 megawatt hours (MWh) of electricity per year,
15 and at peak production, provide enough power and energy to serve the
16 requirements of more than 15,000 homes.

17 **Q. Please describe the environmental benefits of these new solar projects.**

18 A. Taken together, using solar energy to provide customers with renewable
19 energy from these projects will substantially reduce greenhouse gas emissions
20 and decrease fossil fuel usage. Over the life of the projects, FPL's proposed
21 solar energy centers will prevent emission of more than 3.5 million tons of
22 greenhouse gases, as well as other pollutants, which, according to the U.S.
23 Environmental Protection Agency (EPA) is equivalent to removing

1 approximately 25,000 cars from our roads. In addition, these projects will
2 decrease fossil fuel usage by more than one million barrels of oil and by about
3 51 billion cubic feet (Bcf) of natural gas.

4 **Q. How will these new projects position Florida in the continuing effort to**
5 **develop renewable technology and address climate change?**

6 A. In addition to providing electricity for customers with tangible environmental
7 and fuel usage benefits, these projects will constitute significant steps forward
8 for Florida renewable energy and for the energy industry. Construction of
9 these three Next Generation Solar Energy Centers will result in Florida
10 becoming the second largest supplier of utility-scale solar power in the nation.
11 Operating solar resources on this large utility-scale will provide a strong
12 platform upon which Florida can build in becoming a global leader in solar
13 power, and will further advance Florida's efforts and leadership in addressing
14 climate change.

15 **Q. Please describe FPL's efforts to protect endangered species and**
16 **environmentally sensitive lands.**

17 A. FPL has a history of programs that support the protection and public education
18 of endangered species and sensitive lands. These include endangered or
19 threatened species like sea turtles, the American crocodile, Florida manatee,
20 and others. Here are a few examples:

21

22 • Sea turtles – As part of its commitment in support of protecting and
23 rehabilitating sea turtles, FPL Group shareholders donated \$250,000 to

1 the Loggerhead Marine Life Center in Juno Beach. The center helps
2 educate the public on the importance of protecting and preserving
3 these animals, conducts sea turtle research, and rescues and
4 rehabilitates sick and injured turtles. FPL is proud to be a partner with
5 this prestigious group. In addition, as required by permit conditions to
6 operate the St. Lucie nuclear station, FPL maintains a sea turtle
7 monitoring and research program at its St. Lucie nuclear power plant.

8 • American crocodile – About nine-tenths of FPL’s Turkey Point
9 nuclear power plant property south of Miami remains in its natural
10 state of mangroves and fresh water wetlands. More than 60 species of
11 birds and animals inhabit the 11,000 acre property, including
12 endangered American crocodiles. To comply with the Endangered
13 Species Act, FPL personnel help nurture young hatchlings and
14 preserve the crocodile habitat.

15 • Florida manatee – An endangered species found in Florida, manatees
16 need warm water during cooler winter months and have become
17 dependent on man-made warm water refuges such as power plant
18 outfalls. FPL has worked closely with regulatory agencies and
19 environmental organizations for more than 30 years to ensure that they
20 are protected.

21 • FPL’s Everglades Mitigation Bank – This is a critical link to the
22 success of restoring the Everglades ecosystem to its natural condition.
23 The 13,455-acre project is located in southern Miami-Dade County

1 adjacent to FPL's Turkey Point power plant. Home to 46 protected
2 species of wildlife designated as endangered, threatened, or of special
3 concern, it contains several unique ecosystems. FPL's Everglades
4 Mitigation Bank's size and unique location have created a seamless
5 wildlife corridor between two national parks – Biscayne and
6 Everglades national parks. These environmentally sensitive lands are
7 a key component to the Comprehensive Everglades Restoration Plan.
8 Mitigation banking generally involves the creation, enhancement and
9 preservation of wetlands on a large tract at one location to provide
10 mitigation "credits" for numerous smaller projects that will impact
11 wetlands.

12

13

SIX SIGMA QUALITY

14

15 **Q. Please briefly describe your responsibilities in the area of quality.**

16 A. I lead an organization called Operational Excellence comprised of Six Sigma
17 Quality-certified practitioners who are responsible for solving complex
18 operational business problems and fostering a culture of breakthrough quality
19 improvements throughout the Company. This involves examining existing
20 operational processes, eliminating non-value added work, removing defects
21 and errors, and implementing new measurement systems to monitor and
22 control ongoing performance and quality. In addition, the Operational

1 Excellence group is responsible for training staff throughout the Company in
2 Six Sigma statistical quality tools and techniques.

3 **Q. How has FPL's quality management evolved?**

4 A. FPL is considered a leader in the area of quality and ranks high among other
5 utilities as well as other industries. FPL helped create and draft the bill for
6 the U.S. Quality Award, which Congress passed in 1988 as the Malcolm
7 Baldrige National Quality Program. In 1989, FPL was the first company
8 outside of Japan to win the prestigious Deming Prize. The Deming Prize
9 recognizes outstanding achievement in quality management.

10

11 In 2001, FPL introduced a new discipline called "Six Sigma" into its quality
12 program. Six Sigma is about aligning FPL's customer needs, strategic
13 imperatives, and key customer and process requirements, using advanced
14 quality and statistical tools to achieve breakthrough productivity and problem
15 solving. Trained practitioners provide expertise and guidance to business unit
16 subject matter experts in the use of advanced statistical analysis to lead
17 strategic high impact process improvement projects. They follow a five step
18 process to define the problem, measure the impact, analyze the failure modes,
19 implement changes to improve the process, and monitor the output to ensure
20 control. This process is mapped in exhibit CAB-2.

21

22 FPL continues to be recognized as a top performer in quality and is asked to
23 participate in many recognized events and quality boards such as the U.S.

1 Quality Council, American Society of Quality and the Florida Sterling
2 Council. As a member of the Florida Sterling Council, FPL promotes and
3 encourages quality at other Florida companies by sharing best practices and
4 providing learning opportunities.

5 **Q. What benefits can you attribute to quality assurance?**

6 A. Our customers have realized the benefits of many of our quality projects. For
7 example, one Six Sigma project undertaken addresses the momentary outages
8 experienced by customers. This project resulted in improvements to the
9 synerGEE system enabling the Company to more accurately report fault
10 locations and identify the true fault causes. This has helped us to identify
11 additional opportunities to reduce momentary outages experienced by
12 customers. An additional benefit of minimizing outage frequency is a
13 reduction of costs due to equipment damage. In 2008, we decreased our
14 average momentary outages from 15.02 to 13.48 momentary interruptions per
15 year, in part through the implementation of these Six Sigma projects.

16

17 **INFORMATION TECHNOLOGY**

18

19 **Q. Please briefly describe FPL's recent technology investments.**

20 A. FPL is investing in new IT systems that give customers more control and
21 improved reliability, among other benefits. Since 2006, some of these
22 technology investments include the upgrade of systems in the Distribution
23 business unit including Work Management, Asset Management, Distribution

1 Management, and Outage Management. These systems enhance operational
2 effectiveness through improved customer service and lower costs. FPL also
3 has invested in new voice response systems and technology in the Customer
4 Care Centers to give customers more choices and make it easier for them to
5 transact business. The FPL website has been improved to make it faster and
6 easier for customers to use. It has been updated to make it more customer
7 friendly and to provide more useful information to customers. For instance,
8 the website has enhanced customer billing, service and payment functionality.
9 It also provides information on customers' energy usage, enabling them to
10 modify their consumption patterns. These improvements have resulted in
11 increased participation in billing, on-line payment options, and a reduction in
12 high bill-related calls. FPL's robust and content-rich website ranked second
13 in the ESource 2007 Review of North American Electric and Gas Websites.
14 These and similar developments are discussed in the testimony of FPL witness
15 Santos.

16
17 The Company also implemented the Microsoft Collaboration Suite including
18 email, collaborative communications, file sharing, and web-based meetings.
19 Implementation of this technology has resulted in improved operational
20 efficiencies by reducing business travel and paper processing and improving
21 communications. Furthermore, the Company upgraded its cyber security
22 supporting generation plants and the transmission and distribution systems, as

1 well as the overall business operations through implementation of both
2 software and hardware firewalls.

3 **Q. Why does FPL need to invest in technology?**

4 A. FPL invests in technology for three basic reasons: 1) to create value for the
5 Company and our customers through greater operating effectiveness; 2) to
6 provide security for the Company's physical and information assets; and 3) to
7 meet legal and/or regulatory requirements. FPL's nuclear, financial, and
8 customer systems, as well as the current communications network, are up to
9 15 to 20 years old. Due to their age, failure rates and the cost of maintenance
10 of these older systems are significantly increasing. These systems will soon
11 not be able to be effectively supported by the Company. Later in my
12 testimony, I will describe current and future projects, such as SAP, the
13 Nuclear Asset Management System (NAMS), and the Customer Information
14 System upgrade (CIS III) that will allow FPL to better manage work, assets,
15 people, and finances, while also enhancing many aspects of service to
16 customers.

17 **Q. How have these investments in technology contributed to the Company's
18 superior performance?**

19 A. The investment in technologies by FPL has improved FPL's efficiency,
20 reduced cost, and enhanced service and reliability to customers. The new
21 systems in the Distribution business unit have improved the scheduling of
22 repair work; improved asset management, including pole inspections;
23 improved inventory management, including truck stock; improved electronic

1 surveillance of the distribution grid; and significantly improved the ability of
2 the Company to complete storm restoration. Overall, these initiatives have
3 reduced cost and improved service to our customers.

4

5 The upgrade to our Customer Care Centers has reduced customers' wait time
6 and made it easier for customers to transact business with us. At the same
7 time, productivity of the Customer Care Center personnel has improved and
8 additional management information to make further improvements is now
9 available.

10

11 Upgrading the FPL website has made more information available to our
12 customers while making the site easier for them to use, reducing their need to
13 call the Customer Care Center. It has also improved the bill payment
14 experience for the customer by saving the customer time and postage.

15

16 While the implementation of the Microsoft Collaboration Suite is currently in
17 progress, its features such as web-based meetings, document sharing, and
18 collaborative communications already show a lot of promise in improved
19 operational and management effectiveness by allowing paperless interaction
20 of people and groups on a real-time basis and a reduction in business travel for
21 in-person meetings.

22 **Q. What are some of the issues that are of concern regarding the protection**
23 **of FPL's computer network and control systems?**

1 A. Improvements in cyber security are mandatory in today's world. The
2 improvements to our technology have protected our critical information and
3 systems. While the Company has been rated well in periodic "ethical
4 hacking" tests by third party cyber security experts, the stakes keep getting
5 higher and thus will require continuous investment.

6
7 There are many aspects of cyber security that are mandated by state and
8 federal laws or regulations. For example, laws requiring FPL to protect
9 customer and employee Non-Public Information (NPI) have required FPL to
10 develop and implement policies and procedures for how we handle access to
11 this information. In addition, significant changes to our Customer Information
12 System (CIS) were required to control employee access to this information.

13
14 After the terrorist attacks of September 11, 2001 and the 2003 Northeast
15 blackout, Congress empowered the Federal Energy Regulatory Commission
16 (FERC), acting through the North American Electric Reliability Corporation
17 (NERC), to develop cyber security standards that require significant new
18 policies, procedures, technology and documentation. For example, NERC
19 requirements include a hardened physical and cyber perimeter around
20 specified locations and equipment. This includes physically modifying
21 buildings and installing cameras and card readers. For the electronic security
22 perimeter, this includes new firewalls, intrusion detection systems, and special
23 equipment to allow secure remote cyber access to locations. These standards

1 impact FPL's System Control Center, specified plants, substations and
2 Information Technology group.

3

4 Last, the Nuclear Regulatory Commission (NRC) regulations are very similar
5 to NERC requirements but are much more extensive.

6 **Q. Please describe FPL's key current and future technology projects.**

7 A. Some of FPL's most significant current and planned future technology
8 investments are:

9

10 • Nuclear Asset Management System (NAMS) – this project will
11 upgrade the systems currently in use to manage the operations of our
12 nuclear plants including work management, asset management,
13 purchasing, corrective action tracking, and radiation monitoring. The
14 benefit of the NAMS projects is to provide a platform for
15 standardization of all nuclear processes and transactions across the
16 entire nuclear generating fleet. This standardization is intended to
17 result in efficiencies and improved controls in support of this complex
18 operation.

19 • SAP – this project will replace or upgrade systems currently in use for
20 finance and accounting, human resources, payroll and supply chain
21 with the latest version of SAP, an industry-leading enterprise resource
22 planning system. The SAP project encompasses the design and
23 development of fully integrated financial and control reporting for the

1 utility, along with implementation of a suite of modules including
2 procurement and inventory management, accounts payable, expense
3 reporting, and cash management. The integrated approach of SAP,
4 along with new functionality, will improve the Company's ability to
5 manage cost and forecast resource demands and requirements for
6 work, materials, and labor.

7 • Customer Information System upgrade (CIS III) – This project will
8 replace and upgrade the systems currently used for customer billing,
9 care center operations, and all customer information related needs.
10 These include support of: service and repair, restoration, demand
11 management, customer communications, and many analytic processes.
12 An important benefit of this project, in addition to improving
13 operational effectiveness and customer service will be to support our
14 efforts to provide more and better billing alternatives. Furthermore,
15 without this project, FPL will not be able to effectively support
16 requirements of a potential future smart grid.

17 • Future Enterprise Network Architecture (FENA) – this project will
18 upgrade voice and data capability by changing the network
19 architecture and replacing both network hardware and software, which
20 will improve speed and capacity, resulting in improved quality and
21 security management capability. The Company's communications
22 network is currently a mix of technologies built over a span of 20
23 years. The current network is no longer adequate to transport voice

1 and data communications essential to conduct and manage business.
2 The upgrade project replaces everything from switches to circuits,
3 establishes a modern architecture with new features and functions and
4 provides better quality of service management.

5 **Q. What is the schedule for implementation of these projects?**

6 A. Currently, the projects are scheduled as follows:

7

8 • NAMS project implementation is scheduled for 2009 for both FPL
9 nuclear plants.

10 • SAP for supply chain and financials will be deployed in 2009 - 2010.

11 • FENA Phase I will be deployed in 2009 - 2010. FENA Phase I
12 includes the replacement of the current Nortel based network
13 infrastructure with a Cisco-based network infrastructure for 118 FPL
14 sites. This new infrastructure is an enabling architecture that will
15 provide the foundation for our information, operations and cyber
16 security needs. Future phases will include new features and functions
17 which will allow for improved business capabilities.

18 **Q. In these tough economic times, why is it necessary for FPL to continue**
19 **these measures?**

20 A. Even in the current economic environment, these investments make sense
21 because they result in operational efficiencies and help reduce ongoing costs,
22 improve customer service, give greater control to the customer to manage

1 consumption, position FPL for even better response to storms and other
2 events, and enhance cyber security protection.

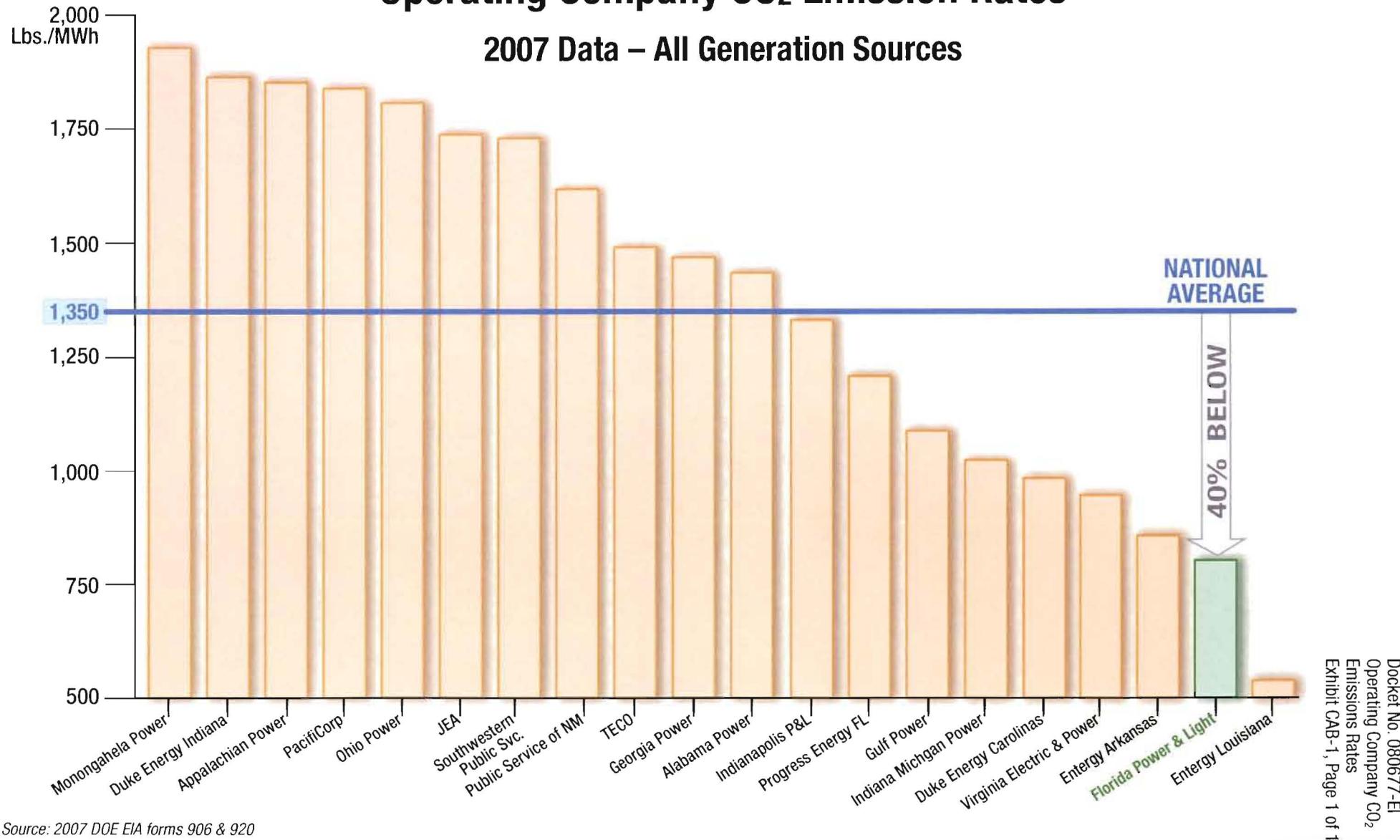
3 **Q. Does this conclude your direct testimony?**

4 **A. Yes.**

FPL's CO₂ Emission Rates Among Lowest in Nation

Operating Company CO₂ Emission Rates

2007 Data – All Generation Sources



Docket No. 080677-EI
 Operating Company CO₂
 Emissions Rates
 Exhibit CAB-1, Page 1 of 1

Source: 2007 DOE EIA forms 906 & 920

Six Sigma DMAIC Process Map

