BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF GEISHA J. WILLIAMS

DOCKET NO. 050045-EI

MARCH 22, 2005

Q. Please state your name and business address.

A. My name is Geisha J. Williams. My business address is Florida Power & Light Company, 9250 W. Flagler Street, Miami, Florida, 33174.

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

A. I am employed by Florida Power & Light Company (FPL or the Company) as Vice President, Distribution.

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

A. I am responsible for the planning, engineering, construction, operations, maintenance, and restoration of FPL's distribution infrastructure.

Q. Please describe your educational background and professional experience.

A. I have a Bachelor of Science degree in industrial engineering from the University of Miami and a Masters of Business Administration from Nova Southeastern University. I joined FPL in 1983 and have served in a variety of positions in distribution operations, customer service, and marketing. I have been Manager of Commercial/Industrial Marketing, Regional Manager of Customer Service, and Manager of External Affairs. I also am a member of the Dean's Advisory Council for the College of Engineering at Florida International University, a

member of the Association of Edison Illuminating Companies' Power Delivery Committee, a member of Leadership Florida Class XXIII, a former Commissioner of the 11th Circuit Judicial Nominating Commission, and a former director of the Florida Chamber of Commerce Management Corporation.

Q. Are you sponsoring an exhibit in this case?

A. Yes. I am sponsoring an exhibit consisting of three documents, GJW-1 through GJW-3, which are attached to my direct testimony.

Q. Are you sponsoring or co-sponsoring any MFRs in this case?

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

- B-13 – Construction Work in Progress
- B-24 – Leasing Arrangements
- C-8 – Detail of Changes in Expenses
- C-15 – Industry Association Dues
- C-34 – Statistical Information
- E-7 – Development of Service Charges

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to describe the superior reliability and customer service, and the effective cost management provided by the Distribution business unit (Distribution) to FPL customers. I will also discuss the upward cost pressures on Distribution and their impact on the 2006 forecast.

RELIABILITY

Q. Can you describe Distribution's reliability program and its results?

A. The program is comprised of multiple initiatives designed to reduce the average time a customer is without electricity and to sustain these improved results. Improvements are sought to both prevent outages from occurring and to minimize outage time if an outage does occur.

Distribution employs a centralized organization to provide a coordinated system-wide approach to reliability. This organization identifies, analyzes and prioritizes causes of past interruptions, targeting causes that would yield the largest customer benefits. An integrated set of initiatives has been designed to address the greatest areas of opportunity to further improve reliability. A summary list of the initiatives is provided in Document No. GJW-1 of my testimony. The effectiveness of each initiative within the program is evaluated on an ongoing basis and resources redeployed as necessary to maximize overall performance results.

As can be seen in Document No. GJW-2 of my testimony and the following summary, results have been impressive. Since 1998, there have been significant improvements in FPL's reliability such as:

- A reduction of more than 30% in customers' average annual outage time. The standard industry performance metric for this is the System Average Interruption Duration Index (SAIDI). SAIDI encompasses both the average frequency of outages and their average duration and,

therefore, is the most relevant indicator for customers. For 2003 and 2004 FPL's results were the best in the State. Further, based on the Edison Electric Institute's (EEI) 2003 Reliability Report, FPL Distribution's performance ranks among the industry leaders and is 50% better than the industry average.

- A reduction of more than 20% in the average annual number of outages that a customer experienced. The industry standard measurement for this "frequency" element is the System Average Interruption Frequency Index (SAIFI).
- A reduction of more than 10% in the average time it takes to restore a customer's power if an outage does occur. This "duration" element is measured by the Customer Average Interruption Duration Index (CAIDI).

It should be noted that this excellent performance has been achieved while base rates have been reduced by more than 15% since 1998.

Q. Please provide some examples of the reliability initiatives.

A. Vegetation Management – Vegetation growth into power lines represents one of the top causes of customer interruptions and is a particular challenge in Florida due to the year-round growing season. FPL has always had a program in place for vegetation management, but beginning in 1997 Distribution has significantly enhanced it. In 2004, Distribution trimmed vegetation from 9,300 miles of line. This represents about 1,800 more miles (almost a 25% increase) over the 7,500

miles trimmed in 1998. We estimate this has meant avoiding about 1 million customer interruptions annually. We are currently on a 3-year cycle for all feeders and are accelerating the pace for laterals. We have also achieved additional outage reductions by moving to a circuit-clearing practice whereby we trim all feeders and laterals associated with a given substation at the same time.

Cable Rehabilitation – Another significant cause of interruptions has been underground cable failures. Since 1998, about 2,400 miles of direct buried feeder and lateral cable have been rehabilitated either by injecting the cable with silicone which extends its life or, when injection was not an option, by replacing the cable. We have determined that once a section of cable experiences a couple failures replacing or injecting the cable is the best way to avoid increasingly frequent outages. We estimate this program has avoided more than 47,000 customer interruptions since 1998.

Automated Feeder Switches – This program started as a pilot in 2001 with the first significant deployments in 2002. It consists of installing, operating and maintaining remotely–controlled automated switches which isolate faults by segmenting lines into smaller sections. The result is that fewer customers are affected by any given fault thereby reducing the overall number of customers interrupted. To date, more than 300 switches have been deployed with approximately another 400 planned for installation by 2006. Even though this is a

relatively recent program, we estimate that almost 140,000 customer interruptions have already been avoided.

Q. What benefits has Distribution seen from reliability research and development efforts?

A. Distribution continuously works on developing and evaluating a number of new innovative technologies. I will discuss a couple of these that are aimed at addressing equipment failures, a significant cause of outages.

Partial Discharge Testing – This diagnostic tool used for testing underground cables to identify existing or potential locations of faults has already yielded substantial cost savings. FPL has been an early adopter of this emerging technology which we have successfully employed in two ways. First, to determine the extent of work needed to repair a cable or splice after a failure. Previously, the solution was to replace the entire cable. But, as a result of the more precise diagnosis, we have saved approximately $5 million by replacing only the sections needed. Second, we have used the tool on a preventative basis to test cables to see if they are vulnerable to failure. We have saved about $8 million so far by avoiding replacement of cable sections that should have been at their end of life based on age but were found to still be functioning adequately.

Lightning Protection and Predictive Modeling – We are studying ways to minimize the impact to customers of lightning by developing enhancements to make our facilities more resistant and by better prediction of weather events.

These measures should reduce the number of interruptions, restoration time and associated cost. The Lightning Protection Standards project is designed to search for enhanced construction or other protection schemes. The data collected thus far by triggering strikes on a de-energized line section enabled us to develop a computer model which simulates the impact of lightning in multiple framing and operating conditions. Initial results indicate that in most cases our existing protection and framing standards are adequate for nearby strikes, but cannot withstand a direct strike. We are also working to enhance our lightning location and timing forecast modeling which should increase the effectiveness of our service centers in allocating resources. We have already improved forecast accuracy by establishing correlations and statistical equations between lightning occurrences and various weather parameters such as; wind flow speed, direction and temperature, moisture, and convection. We plan to continue refining the model by incorporating additional specialized parameters from the National Weather Service.

Q. Given the success of Distribution's reliability program, what are your plans going forward?

A. We continue to aggressively seek ways to further improve reliability to our customers. An example of the difficult challenges we face is reducing vegetation-related interruptions. First, some customers refuse to permit pruning or removal of trees which interfere with the lines, thereby delaying or preventing necessary work. Ensuring safer and more reliable operations in these circumstances will require closer community and developer involvement to address current situations

and avoid future problems through better landscape design. Second, even though the number of customers affected by tree-related interruptions has been reduced, additional resources need to be applied to avoid outages on lateral lines. As mentioned before, this requires increasing the frequency of trimming these circuits. Therefore, it is necessary and prudent to make further significant incremental investments in our vegetation management program.

We will also continue to perform proactive analysis to identify any worsening trends for any of our infrastructure components and take the appropriate mitigation steps. Additionally, we will continue to improve our inspection and predictive modeling programs. Finally, our Model Feeder initiative will allow us to continue optimizing the configuration of feeders we construct.

Q. As was evident from the unprecedented 2004 season, restoration of service after hurricanes and tropical storms is an important issue in Florida. Please comment on your emergency preparedness and the 2004 restoration results.

A. Many records were established during 2004's storm season. This was only the second time in recorded history that four hurricanes have struck a single state in one year – and the last time was 120 years ago. Also, three hurricanes have never previously made landfall in FPL's service territory in one year. And, to our knowledge, the 2.8 million outages associated with Hurricane Frances were the most ever experienced by a single utility in U.S. history (only four other utilities have that many customers). The storms impacted virtually every part of our 27,000 square mile service territory, requiring 5.4 million customer restorations.

More than 3.1 million, or 75%, of our 4.2 million customers were affected at least once.

FPL has developed, and continuously hones, comprehensive contingency plans for rapid and safe restoration of customers' service. These plans are thoroughly tested and refined through annual "dry run" exercises and by performance analysis after each event. FPL's primary mission is to safely restore the greatest number of customers in the least amount of time so that the communities we serve are able to return to normalcy as rapidly as possible. Our many years of experience have shown that extensive planning, training, process discipline, on-site management teams' expertise, and scalable implementation are critical.

The 2004 restoration results demonstrate that by consistently and flexibly applying our restoration strategy we successfully achieved our primary mission. Over 75% of the affected customers were restored by the third day after each storm. We were able to effectively manage as many as 13 staging sites per event and coordinate up to 16,700 personnel – both of which were substantially more than in any prior restoration. While in recent times FPL has experienced a number of lesser hurricanes, only once did we have to restore in the wake of a major hurricane, Hurricane Andrew in 1992. However, in 2004, we experienced the landfalls of two major hurricanes and one category two hurricane within six weeks. In spite of the challenges, we completed restoration from all these storms in two weeks or less, as compared to more than one month for Andrew. Based on

these outcomes, we believe that our emergency restoration response plans, processes and implementation proved to be highly effective and significantly exceeded all past performance.

FPL is recognized as an industry leader in storm restoration. We have been visited by numerous other utilities desiring to learn and implement our processes and practices. Further validation of this expertise is the industry awards we have received. FPL has received EEI awards for its emergency response performance three times in the past four years. First, in 2000, we received the Emergency Response Award for our performance during Hurricane Irene, which affected 1.4 million customers. Secondly, in 2003, FPL was recognized with the Emergency Assistance Award for our efforts in supporting Dominion Virginia Power during Hurricane Isabel. And again this year, our industry-leading performance was recognized with the 2004 Emergency Response Award.

CUSTOMER SERVICE

Q. In addition to the customer benefits resulting from excellent reliability and restoration, please describe some of Distribution's other initiatives aimed at delivering continuously improving customer service.

A. Distribution is very focused on providing our customers with dependable service delivered in a responsive and caring manner. We recognize that any power outage, whether due to a hurricane, a thunderstorm, new infrastructure construction, system maintenance, or some other cause, is a source of

inconvenience and stress for customers. For this reason, we have identified key customer issues, developed solutions, and implemented many initiatives that have boosted the effectiveness of our customer service, particularly in the areas of communications and process performance. To support these enhancements, we have also implemented many significant new information systems.

Q. Regarding customer communications, what measures has Distribution undertaken to ensure effective performance in this critical area?

A. One prime example is providing better information to our customers when they experience an outage. FPL was an industry pioneer in providing customers with immediate Estimated Time of Restoration (ETR) for service when a customer calls to report an outage.

In creating the ETRs, FPL uses sophisticated computer simulations that analyze the pattern of calls received to determine what type of facility is likely affected and uses those results to create the estimate. Some of the factors that are evaluated are historic requirements for the specific type of repair, crew workload, time of day, season, and geographic location. To provide customers further flexibility, they can receive this information either through FPL's voice response unit (VRU) or by speaking directly with a care center representative. Once repair personnel arrive and assess the situation, an updated estimate is communicated to our dispatch center if necessary. If a customer desires, they are automatically called back with an update whenever the new estimate varies from the original by more than one hour (either up or down). Other information provided includes the

outage cause, number of customers affected, and damage found. Customers are also called back after the work is complete to ensure that their power has been restored.

We continue to work to improve the quality of both the estimates and the delivery mechanisms. The tables used for the estimates are routinely updated to reflect anticipated performance based on history, so that the estimates will be as accurate as possible. Currently, in excess of 80% of our trouble tickets are being restored within the targeted one hour of the ETR time – an overall excellent level of accuracy. Also, the VRU and screens used by the care center representatives have undergone substantial redesign to ensure consistency, the use of customer-friendly terms, and to include additional information and scripting regarding issues such as the crew's status, outage cause, ETR updates, and area-specific emergency messages. Finally, like other care center processes, random samples of interactions with customers are monitored and evaluated to ensure proper quality control and performance.

Q. Since excellent customer service relies on consistent process performance, how do you ensure FPL is delivering on this throughout the service territory?

A. FPL has always focused on continuous improvement in this area. To build on previous advancements, we have launched a program called "Model Area." Initiatives in this program target standardizing field process delivery to improve productivity, meet customer commitments, and keep customers fully informed along the way. Assessments are conducted to provide area-level reviews of

compliance with established field processes. Hundreds of process steps are evaluated and training is conducted to reinforce areas of good performance and address any needed enhancements. Development and refinement of computer systems provide critical support for this program.

Q. Can you further explain the role technology is playing in delivering enhanced customer service?

A. Yes. Distribution has made, and continues to make, substantial investments to expand our existing computer systems' capabilities to provide customers better, more efficient service and information. We are nearing completion of a comprehensive program implementing several major new systems. For example, we have installed a new data and voice radio communication system. This system helps to eliminate delays in the movement of service restoration crews throughout our service territory and provides more complete coverage allowing mobile data terminals to be used system-wide. The value of these capabilities has been demonstrated in the past and was again evident during the 2004 storm restorations. Crews who moved from one end of the state to the other could immediately go to work without the delays previously required to reprogram radios and mobile terminals.

A new Work Management System was implemented providing the ability to manage and measure all work from a single system with resource management tools. This system improves resource utilization through enhanced scheduling to better meet customer commitments. Cumulative cost savings since 2003 have

been almost $30 million from increased crew productivity and reduced third-party contracting.

A companion system is the Mobile Work Management System. This paperless system allows field crews to receive, update and complete work using laptops in their trucks. Approximately 250 crews are using the system and over 30,000 work requests have been completed to date using this tool. 2004 savings were in excess of $2 million. Productivity gains are derived from increasing available work time by reducing travel, administrative and technical support time.

Additional examples of new or upgraded systems are:

- The new Asset Management System which houses records of all existing and proposed facilities with their precise location and other relevant information displayed in a geographical format. Besides daily operational benefits, direct savings are expected from reduced drafting labor costs.
- The new Routine Work Management System distributes work orders to the field metering department via hand-held devices. It automatically schedules work based on crew workload, work area, and the closest personnel to the job. This increased productivity enhances our ability to meet customer commitments for repairs and has already saved about $2 million. Savings are driven by more efficient connect and disconnect performance and decreased dispatcher time.

- The new Distribution Management System is currently being implemented and will provide a real-time computer model of the distribution network to Dispatch Center operators. Information currently tracked on wall-mounted "trouble boards" will be electronic and accessible from any location via FPL's intranet. In addition to operational improvements, future savings are expected from dispatch labor reductions.

All of these measures, and additional planned system enhancements, are substantially improving efficiency, process consistency and customer communications and help provide savings to offset other cost requirements.

Q. Have these actions resulted in improved customer service?

A. **Yes. Since 1998, there has been a reduction of about 55%** in logged service quality-related customer complaints per 1,000 customers.

Q. You have previously mentioned safety in conjunction with other issues. Would you comment on Distribution's worker safety performance?

A. Yes. FPL considers safety to be integral to effective operations. The superior reliability and customer service discussed above have been delivered while maintaining a continual focus on worker safety. In fact, Distribution is currently posting our best safety performance on record. As a result of concerted and sustained efforts, we have achieved about a 45% improvement since 1998 in the Occupational Safety & Health Administration's (OSHA) industry-standard metric of reportable injuries per 200,000 man-hours. The absolute number of injuries

has declined by almost 40%. This achievement is even more impressive given the requirements of performing three back-to-back-to-back hurricane restorations in 2004.

The main reason for this dramatic improvement is our commitment to the "Total Safety Culture". This program involved establishing a partnership with employees to institute an environment where actions are guided by the principles of trust, open communication, mutual respect, and actively caring. Some of the specific actions involved are crew visits to ensure compliance with safety rules, peer-to-peer observations and coaching, plus constant communication of the safety plan with monthly themes. Distribution continues to enhance and refresh the program. New initiatives such as the recent "Make the Right Choice – Work Safe" campaign serve to constantly reinforce the need for everyone's continued commitment to safety principles.

2006 DISTRIBUTION COSTS

Q. Please discuss your recent and forecasted capital expenditures.

A. Document No. GJW-3 shows that the required capital investment in the Distribution infrastructure is forecasted to be about $1.8 billion between 2002 and 2006. These capital expenditures are primarily driven by customer growth, reliability initiatives, and infrastructure restoration and maintenance. Customer growth is by far the largest factor, accounting for about 65% of the capital investment. Every year, since 2002, FPL has been adding in excess of 100,000

new service accounts, the size of an entire small utility, and that level is forecast to continue through 2006. Accommodating this growth requires investment not only for the hook ups of individual residences and businesses, but also for capacity upgrades to the upstream network such as new feeders and related equipment, and for other supporting infrastructure such as street lights. The second major investment requirement is for reliability improvements, the customer benefits of which have been described earlier in my testimony. These initiatives account for about 15% of expenditures. As shown in Document No. GJW-1, there are a number of different initiatives, but the heaviest capital requirements are related to the Cable Rehabilitation and Automated Feeder Switching initiatives. The last major driver is restoration and maintenance which combined account for about 15% of spending. The remaining expenditures are for relocations of facilities, vehicle acquisition, and multiple other smaller requirements.

Q. Please comment on Distribution's recent and forecasted Operations & Maintenance (O&M) costs.

A. As shown in Document No. GJW-3, Distribution has been able to largely offset increased O&M costs in past years through cost management efforts. The result has been a relatively modest total rise of less than 5% (less than 1% per year) for the period of 1998 through 2003. If this trend were carried forward from 2003, the forecasted 2006 O&M requirement would only be slightly above the projected trended level in 2006. This somewhat higher amount is because O&M requirements are forecast to exceed Distribution's mitigation capabilities by a

greater extent. Forecasted O&M increases are largely driven by various reliability initiatives previously discussed in my testimony such as vegetation management lateral trimming and Model Feeder.

SUMMARY AND CONCLUSION

Q. Please summarize your testimony.

A. Distribution is responsible for the planning, engineering, construction, operations, maintenance, and restoration of FPL's distribution infrastructure. Distribution continues to improve its excellent delivery system reliability performance. FPL's customers benefit from low service unavailability (stated as the average amount of time a customer is without electricity per year). In fact, 2004 performance, which was more than 30% better than 1998, is the best in Florida, ranks among the industry's top performers, and is 50% better than the 2003 industry average. This performance has been achieved even while base rates, since 1998, have been reduced by 15%.

Distribution has continued to search for and implement enhancements to customer service. The cumulative success of these initiatives has resulted in a reduction of about 55% in logged service quality complaints filed with the Commission since 1998.

This reliability and customer service performance has been delivered while maintaining a continual focus on safety. In fact, Distribution's current safety performance is the best on record. The OSHA rate has improved by 45% since

1998 and the number of injuries has declined by almost 40% during the same time period.

All of these operational improvements have been achieved while still effectively managing costs. Historical O&M increases have been contained to about 1% per year from 1998 through 2003 and are forecast to increase only modestly above this pace by 2006. As in the past, capital investment requirements are forecast to continue to increase at a measured pace, mainly to fund construction of the infrastructure necessary to serve ongoing customer growth and to continue delivering excellent reliability.

Distribution has delivered excellent balanced performance resulting in substantial benefits to customers. This has been achieved as a direct result of Distribution's management and employees committing to safely provide superior reliability and customer service at a reasonable cost. FPL's ability to continue the commitment to delivering this level of performance to our customers requires the increased future funding requested.

Q. Does this conclude your direct testimony?

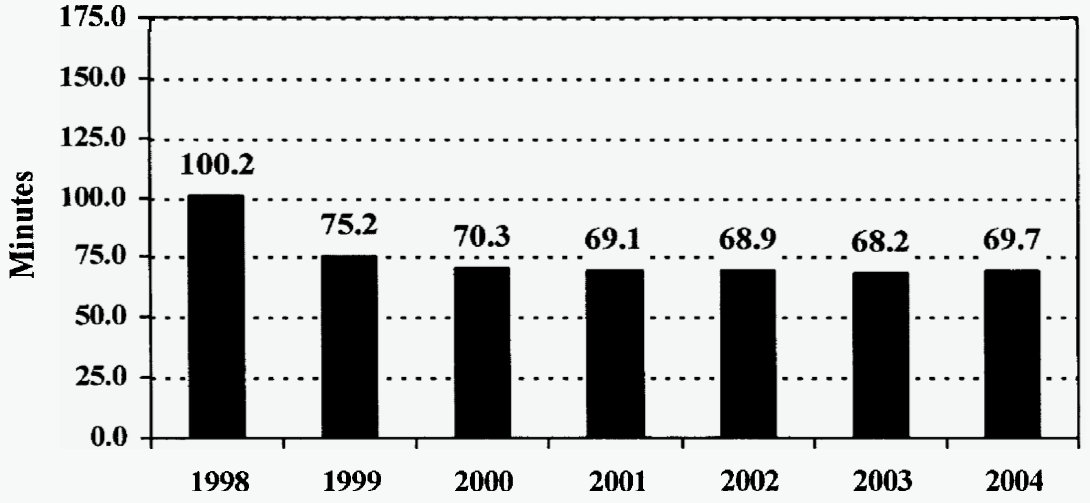
A. Yes.

Reliability Program Initiatives

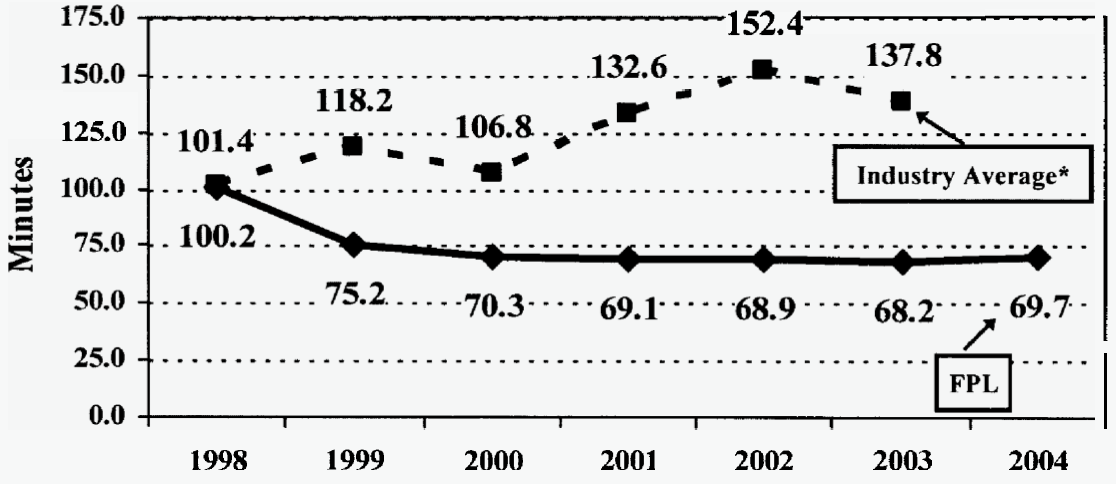
Initiative	Description
Vegetation Management	Integrated program designed to minimize tree and vine related interruptions.
Feeder & Lateral Cable Rehabilitation	Replace all or a section of direct-buried cables.
Automated Feeder Switching	Install switches that automatically sectionalize lines to isolate faults and restore customers.
Model Feeder	Construct new, or retrofit existing, feeders to optimum configuration model standards to reduce customer outage exposure.
Multiple Interruptions & Outliers	Identify and correct feeders, reclosers, laterals, and transformers experiencing the highes number of interruptions.
Customer Impact	Specific projects that focus on improvements for specifically targeted customers or geographic areas.
Thermovision	Infrared predictive diagnostic technology which detects signs of failures, or potential failures, in overhead facilities, coupled with visual inspections.
Pad Mounted Transformers	Inspect and correct any non-compliant conditions.
Capacitor Banks	Install, maintain, and control equipment for VAR management.
Vaults	Inspect and correct any non-compliant conditions in automatic throw-over systems and other vault equipment.
Wall Mounted Switchgear	Refurbish wall mounted switchgear in vaults which are now reaching end of life.
Poles	Inspect and, if necessary, replace creosote poles or brace and/or treat to extend life.
Cathodic Protection	Install new anodes in manholes and underground vaults to rehabilitate paper and lead and submarine cables.
Switch Cabinets	Remove live front switch cabinets which are now reaching end of life.

Distribution Reliability

Distribution SAIDI



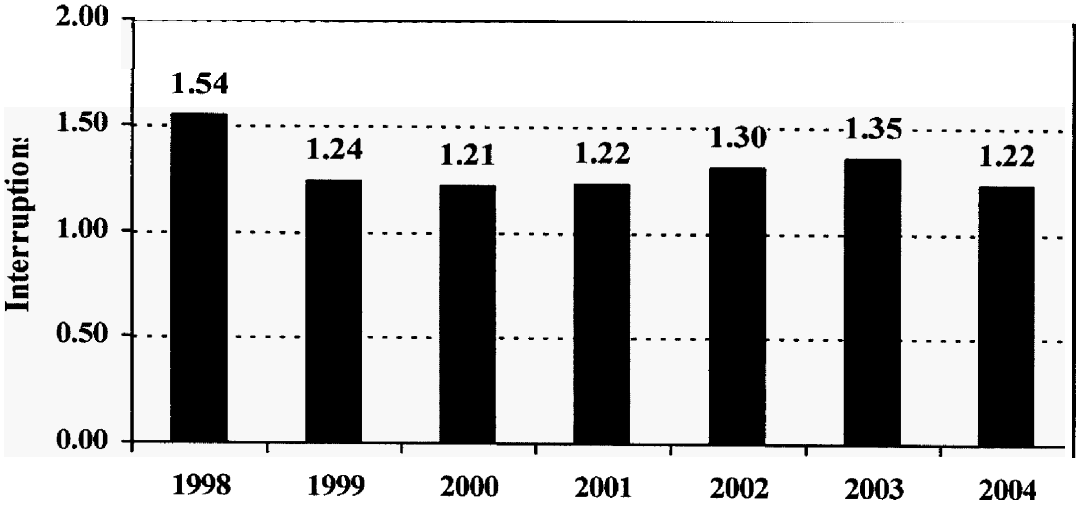
FPL v. Industry Average Distribution SAIDI



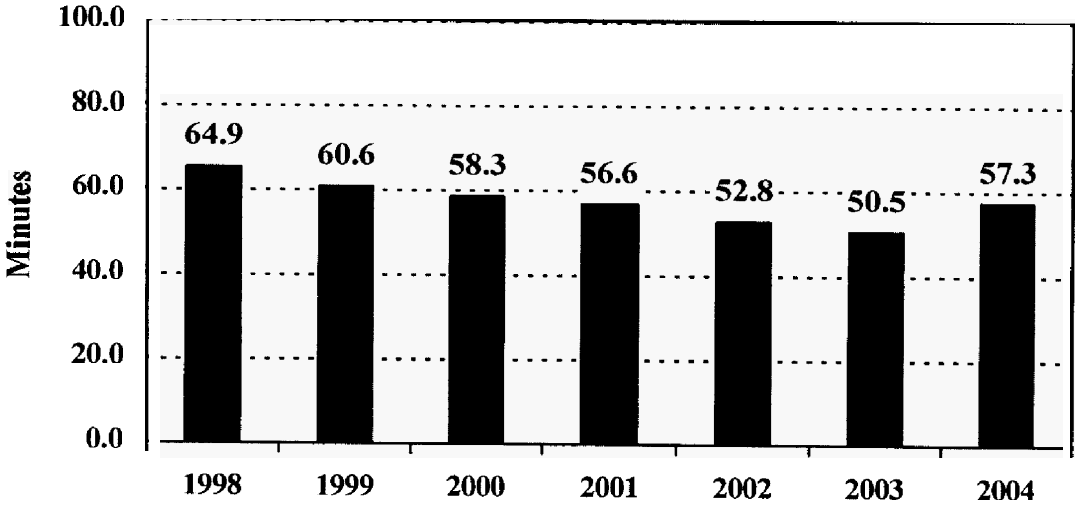
* Industry Average data from EEI (2004 not available)

Distribution Reliability

Distribution SAIFI

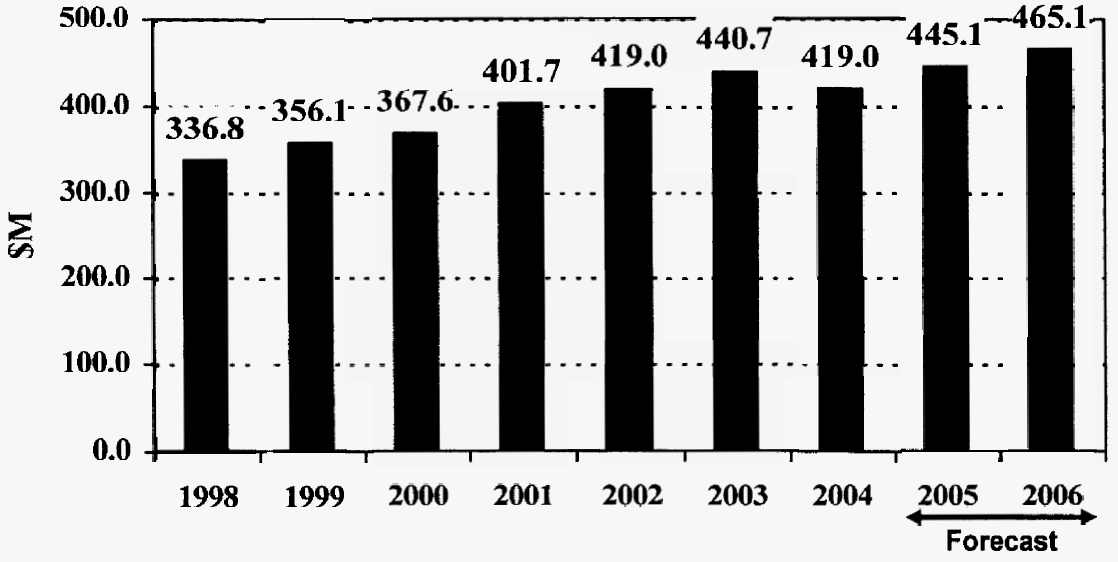


Distribution CAIDI



Distribution Capital Expenditures and O&M

Distribution Capital Expenditures



Distribution O&M