

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Review of 2010 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342, F.A.C., submitted by Progress Energy Florida, Inc.	DOCKET NO. 100262-EI ORDER NO. PSC-10-0684-PAA-EI ISSUED: November 15, 2010
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The following Commissioners participated in the disposition of this matter:

ART GRAHAM, Chairman  
LISA POLAK EDGAR  
NATHAN A. SKOP  
RONALD A. BRISÉ

NOTICE OF PROPOSED AGENCY ACTION  
ORDER APPROVING PROGRESS ENERGY FLORIDA, INC.'S  
STORM HARDENING PLAN

BY THE COMMISSION:

NOTICE is hereby given by the Florida Public Service Commission that the action discussed herein is preliminary in nature and will become final unless a person whose interests are substantially affected files a petition for a formal proceeding, pursuant to Rule 25-22.029, Florida Administrative Code (F.A.C.).

Background

The hurricanes of 2004 and 2005 that made landfall in Florida resulted in extensive storm restoration costs and lengthy electric service interruptions for millions of electric investor-owned utility (IOU) customers. On January 23, 2006, we conducted a workshop to discuss the damage to electric utility facilities resulting from these hurricanes and to explore ways of minimizing future storm damages and customer outages. State and local government officials, independent technical experts, and Florida's electric utilities participated in the workshop.

On February 27, 2006, we issued Order No. PSC-06-0144-PAA-EI, requiring the IOUs to begin implementing an eight-year inspection cycle of their respective wooden poles.<sup>1</sup> In that Order, we noted:

The severe hurricane seasons of 2004 and 2005 have underscored the importance of system maintenance activities of Florida's electric IOUs. These efforts to maintain system components can reduce the impact of hurricanes and tropical

<sup>1</sup> Docket No. 060078-EI, In re: Proposal to require investor-owned electric utilities to implement ten-year wood pole inspection program.

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storms upon utilities' transmission and distribution systems. An obvious key component in electric infrastructure is the transmission and distribution poles. If a pole fails, there is a high chance that the equipment on the pole will be damaged, and failure of one pole often causes other poles to fail. Thus, wooden poles must be maintained or replaced over time because they are prone to deterioration. Deteriorated poles have lost some or most of their original strength and are more prone to fail under certain environmental conditions such as high winds or ice loadings. The only way to know for sure which poles are acceptable, which poles must be treated or braced, and which poles must be replaced is through periodic inspections.

At the February 27, 2006 internal affairs meeting, we took comments from our staff, interested persons, and Florida's electric utilities regarding the need to address the effects of extreme weather events on electric infrastructure. Ultimately, we decided:

1. All Florida electric utilities, including municipal utilities and rural electric cooperative utilities, would provide an annual Hurricane Preparedness Briefing.
2. A proposed agency action recommendation would be filed by our staff for the April 4, 2006 Agenda Conference requiring each IOU to file plans and estimated implementation costs for ongoing storm preparedness initiatives.
3. A docket would be opened to initiate rulemaking to adopt distribution construction standards that are more stringent than the minimum safety requirements of the National Electrical Safety Code (NESC).
4. A docket would be opened to initiate rulemaking to identify areas and circumstances where distribution facilities should be required to be constructed underground.

On April 25, 2006, we issued Order No. PSC-06-0351-PAA-EI, requiring all IOUs to file plans and estimated implementation costs for 10 ongoing storm preparedness initiatives (Ten Initiatives) on or before June 1, 2006.<sup>2</sup> The Ten Initiatives are:

1. A Three-Year Vegetation Management Cycle for Distribution Circuits
2. An Audit of Joint-Use Attachment Agreements
3. A Six-Year Transmission Structure Inspection Program
4. Hardening of Existing Transmission Structures
5. A Transmission and Distribution Geographic Information System
6. Post-Storm Data Collection and Forensic Analysis

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<sup>2</sup> Docket No. 060198-EI, In re: Requirement for investor-owned electric utilities to file ongoing storm preparedness plans and implementation cost estimates.

7. Collection of Detailed Outage Data Differentiating Between the Reliability Performance of Overhead and Underground Systems
8. Increased Utility Coordination with Local Governments
9. Collaborative Research on Effects of Hurricane Winds and Storm Surge
10. A Natural Disaster Preparedness and Recovery Program.

These Ten Initiatives were not intended to encompass all reasonable ongoing storm preparedness activities. Rather, we viewed these initiatives as the starting point of an ongoing process.<sup>3</sup> By Order Nos. PSC-06-0781-PAA-EI (addressing Tampa Electric Company and Florida Public Utilities Company), PSC-06-0947-PAA-EI (addressing Progress Energy Florida, Inc. and Gulf Power Company), and PSC-07-0468-FOF-EI (addressing Florida Power & Light Company), we addressed the adequacy of the IOUs' plans for implementing the Ten Initiatives.

We also pursued rulemaking to address the adoption of distribution construction standards more stringent than the minimum safety requirements of the NESC and the identification of areas and circumstances where distribution facilities should be required to be constructed underground.<sup>4</sup> Rule 25-6.0342, F.A.C., was ultimately adopted.<sup>5</sup>

Rule 25-6.0342, F.A.C., requires each IOU to file an Electric Infrastructure Storm Hardening Plan for review and approval by the FPSC. The Rule also requires a description of construction standards, policies, practices, and procedures to enhance the reliability of overhead and underground electrical transmission and distribution facilities. The Rule requires, at a minimum, that each IOU's plan address the following items:

- (a) Compliance with the NESC.
- (b) Extreme wind loading (EWL) standards for: (i) new construction; (ii) major planned work, including expansion, rebuild, or relocation of existing facilities; and (iii) critical infrastructure facilities and along major thoroughfares.
- (c) Mitigation of damage due to flooding and storm surges.

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<sup>3</sup> Order No. PSC-06-0947-PAA-EI, page 2, issued November 13, 2006, in Docket No. 060198-EI, In re: Requirement for investor-owned electric utilities to file ongoing storm preparedness plans and implementation cost estimates.

<sup>4</sup> Order No. PSC-06-0556-NOR-EU, issued June 28, 2006, in Docket No. 060172-EU, In re: Proposed rules governing placement of new electric distribution facilities underground, and conversion of existing overhead distribution facilities to underground facilities, to address effects of extreme weather events, and Docket No. 060173-EU, In re: Proposed amendments to rules regarding overhead electric facilities to allow more stringent construction standards than required by National Electric Safety Code.

<sup>5</sup> Order No. PSC-07-0043A-FOF-EU, issued January 17, 2007, in Docket No. 060172-EU, In re: Proposed rules governing placement of new electric distribution facilities underground, and conversion of existing overhead distribution facilities to underground facilities, to address effects of extreme weather events, and Docket No. 060173-EU, In re: Proposed amendments to rules regarding overhead electric facilities to allow more stringent construction standards than required by National Electric Safety Code.

(d) Placement of facilities to facilitate safe and efficient access for installation and maintenance.

(e) A deployment strategy including: (i) the facilities affected; (ii) technical design specifications, construction standards, and construction methodologies; (iii) the communities and areas where the electric infrastructure improvements are to be made; (iv) the impact on joint use facilities on which third-party attachments exist; (v) an estimate of the costs and benefits to the utility of making the electric infrastructure improvements; and (vi) an estimate of the costs and benefits to third-party attachers affected by the electric infrastructure improvements.

(f) The inclusion of Attachment Standards and Procedures for Third-Party Attachers.

On May 7, 2007, the storm hardening plans were filed by Tampa Electric Company (TECO), Progress Energy Florida, Inc. (PEF), Gulf Power Company (Gulf), and Florida Power & Light Company (FPL). Docket Nos. 070297-EI (TECO), 070298-EI (PEF), 070299-EI (Gulf), and 070301-EI (FPL) were opened to address each filing. On June 19, 2007, we voted to set the dockets directly for a formal administrative hearing, with the additional mandate to our staff to conduct a series of informal workshops to allow the parties and staff to identify disputed issues and potential areas for stipulation. By Order No. PSC-07-0573-PCO-EI, issued July 10, 2007, the dockets were consolidated for purposes of the hearing with the understanding that each utility's plan would be ruled on separately. FPUC requested to file its storm hardening plan as part of its petition for a general rate increase and have it addressed in its rate case.<sup>6</sup> FPUC's storm hardening plan was approved May 19, 2008.<sup>7</sup>

A formal administrative hearing was held October 3-4, 2007. During the course of the hearing, the parties reached agreement on a number of issues and the dockets were subsequently stipulated. The parties also presented us with a stipulated agreement entitled "Process to Engage Third-Party Attachers." This process, as designed, would allow for the exchange of information between the parties. Per the stipulation, information would be shared among the parties and annual status reports would be filed with us.<sup>8</sup> In addition, the stipulation stated that we would resolve any disputes or challenges to issues related to a utility's plan in accord with Rule 25-6.0342(7), F.A.C. A customer, applicant for service, or attaching entity could file a request for dispute resolution at any time.

On May 3, 2010, PEF filed 2010-2012 its storm hardening plan update as required by Rule 25-6.0342(2), F.A.C. Docket No. 100262-EI was opened to address the updates. On June

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<sup>6</sup> Order No. PSC-08-0019-PCO-EI, issued January 4, 2008, in Docket No. 070300-EI, In re: Review of 2007 Electric Infrastructure Storm Hardening Plan files pursuant to Rule 25-6.0342 F.A.C., submitted by Florida Public Utilities Company, and in Docket No. 070304-EI, In re: Petition for rate increase by Florida Public Utilities Company.

<sup>7</sup> Order No. PSC-08-0327-FOF-EI, issued May 19, 2008, in Docket No. 070300-EI, In re: Review of 2007 Electric Infrastructure Storm Hardening Plan files pursuant to Rule 25-6.0342 F.A.C., submitted by Florida Public Utilities Company, and in Docket No. 070304-EI, In re: Petition for rate increase by Florida Public Utilities Company.

<sup>8</sup> Order Nos. PSC-07-1020-FOF-EI, PSC-07-1021-FOF-EI, PSC-07-1022-FOF-EI, PSC-07-1023-FOF-EI, issued December 28, 2007, in Docket Nos. 070297-EI, 070298-EI, 070299-EI, and 070301-EI, and Order No. PSC-08-0327-FOF-EI, issued May 19, 2008, in Docket No. 070300-EI.

10, 2010, we conducted a workshop to better understand PEF's plan. In addition to the workshop, we sent data requests to the IOUs to obtain clarification and additional information. We considered PEF's plan updates at our October 26, 2010 Commission Conference. This Order addresses PEF's plan updates as required by Rule 25-6.0342. Attachment A to this Order describes the storm hardening requirements. Attachment B contains a comparison of the provisions of PEF's previously approved and updated storm hardening plans, and the costs of implementing the approved and updated plans. Attachment C is a glossary of terms used in this Order. We have jurisdiction over this matter pursuant to Sections 360.04 and 366.05, Florida Statutes (F.S.).

### Review of PEF's Plan Updates

#### Wooden Pole Inspection Program

PEF is continuing its eight-year wooden pole inspection as required by Order No. PSC-07-0078-PAA-EU.<sup>9</sup> PEF will continue to file the results of these inspections in PEF's Annual Electric Utility Distribution Reliability Report.

#### Ten Initiatives

##### **Initiative One** – Three-Year Vegetation Management Cycle for Distribution Circuits

PEF will continue its previously approved plan for this initiative. PEF has a three-year average trim cycle for feeders and a five-year trim cycle for distribution laterals.

##### **Initiative Two** – Audit of Joint-Use Attachment Agreements

PEF will continue performing joint-use pole loading analyses on an eight-year cycle in conjunction with its wooden pole inspection program and annual partial system audits of pole attachments.

##### **Initiative Three** – Six-Year Transmission Structure Inspection Program

PEF will continue its existing transmission structure inspection program, which is on a five-year cycle for structures. PEF will continue conducting inspections of all of its substations each year.

##### **Initiative Four** – Hardening of Existing Transmission Structures

PEF is not making any changes to its currently approved plan for Initiative Four. PEF currently upgrades its existing transmission structures during roadway relocation projects and as other maintenance activities provide cost-effective opportunities. A primary component of this initiative includes changing out existing wooden transmission poles with either concrete or steel poles. Over the next seven years, PEF estimates the program will reduce its percentage of

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<sup>9</sup> Docket No. 060531-EU, In re: Review of all electric utility wooden pole inspection programs.

wooden transmission poles from 75 percent to 50 percent. PEF does not plan to expand its program at this time.

**Initiative Five – Transmission and Distribution Geographic Information System**

PEF completed the transition to the new G-electric system and retired the old FRAMME GIS system in 2008. The move to G-electric is a multi-year, resource-intensive process that moves from a location-based GIS system to an asset-based GIS system, consistent with Order No. PSC-06-0351-PAA-EI. PEF created a team dedicated to upgrading its work management system. The scope of this project includes the implementation of the Facilities Management Data Repository (FMDR) along with the Compliance Tracking System (CTS). This project is currently in the design phase, with a targeted in-service date of 2011.

**Initiative Six – Post-Storm Data Collection and Forensic Analysis**

PEF will continue its previously approved plan for Initiative Six. PEF currently has data gathering procedures, which are able to provide PEF Forensic Assessors (distribution) and Consultants (transmission) with information so that they will be able to make recommendations for improvements to PEF's system when needed. PEF did not experience a hurricane event during 2007-2009; therefore, no significant forensic data is available at this time.

**Initiative Seven – Collection of Detailed Outage Data Differentiating Between the Reliability Performance of Overhead and Underground Systems**

PEF's updated plan continues to assess differences in damage sustained by underground and overhead facilities, and determines whether customer outages are caused by failures in underground or overhead components. PEF states that it did not experience a hurricane event during 2007-2009; therefore, no significant outage data is available to differentiate between overhead and underground facility performance.

**Initiative Eight – Increased Coordination with Local Governments**

PEF proposes to continue coordinating year-round with local governments through its community relations team. PEF representatives will continue to hold various meetings and expositions with local governments, county Emergency Operation Centers (EOCs), and first responders. PEF also proposes to work with counties and cities on projects such as briefings in counties where they provide service, annual storm planning, and collaborating with the Council of Neighborhood Associations (CONA).

**Initiative Nine – Collaborative Research on Effects of Hurricane Winds and Storm Surge**

The electric utilities previously established a non-profit, member-financed organization to coordinate all research efforts through the Public Utility Research Center (PURC), located in the Warrington College of Business at the University of Florida. PURC's work is focused on three main areas of concern: hurricane wind effects, vegetation management, and undergrounding of

electric infrastructure. PEF entered into a Memorandum of Understanding with PURC that extends PURC's research efforts for the IOUs through December 31, 2011.

#### **Initiative Ten – Natural Disaster Preparedness and Recovery Program**

PEF will continue refining its storm recovery plan. This plan is reviewed and updated annually based on lessons learned from the previous storm season and organizational needs.

##### National Electric Safety Code (NESC) Compliance

PEF's updated plan addresses the extent to which, at a minimum, PEF complies with the NESC pursuant to Rule 25-6.0342(2), F.A.C.

##### Extreme Wind Loading (EWL) Standards

New Construction – PEF's updated plan continues its approved approach which adheres to current NESC requirements, executes maintenance plans, and adopts prudent end-of-life equipment replacement programs. PEF has not adopted EWL standards for new distribution construction. PEF reasoned that its own experience coupled with industry experience shows that flying debris and vegetation are the primary causes of distribution pole damage, and these are conditions that EWL standards, and any other overhead construction standard, cannot address. With respect to transmission, however, PEF does apply EWL criteria to its new construction of poles, rebuilds, and relocations of existing facilities.

Major Planned Work – In its updated plan, PEF continues its approach of not applying EWL standards to major planned distribution work, including expansions, rebuilds, or relocations of existing facilities. We note that while Rule 25-6.0342, F.A.C., requires that a utility company's plan address the extent to which EWL standards are adopted for various types of facilities, it does not require a utility to adopt a particular standard. However, consistent with NESC Rule 250C, PEF will continue to use the EWL standards for all major planned transmission work, including expansions, rebuilds, and relocations of existing facilities.

Critical Infrastructure (CIF) – PEF proposes to continue its approach of not applying EWL standards to any of its distribution level CIF. With respect to transmission, PEF will continue the use of EWL standards for all major planned transmission work, including expansions, rebuilds, and relocations of existing facilities, irrespective of whether they can be classified as "critical" or "major."

##### Mitigation of Flooding and Storm Surge Damage

PEF will use a two-prong approach to mitigate damage to underground and supporting overhead transmission and distribution facilities due to flooding and storm surges. First, PEF will seek to identify areas where underground equipment should not be used. Second, in areas where underground equipment may be exposed to minor storm surge or shorter term water intrusion, PEF will use its Asset Investment Strategy Model to identify areas where projects can be put into place to test whether flood mitigation techniques and devices protect equipment such

as switchgears, pad-mounted transformers, and pedestals. In selected project sites, PEF will test and monitor installation of stainless steel equipment, submersible connectors, raised mounting boxes, cold shrink sealing tubes, and submersible secondary blocks. These projects will be analyzed to determine how each performed relative to PEF's current design with respect to outage prevention, reduced maintenance, and reduced restoration times. PEF will also continue to utilize Geo Media software to determine the optimum locations for submersible underground facilities. This method allows PEF to visually determine which geographic areas would most benefit from submersible facilities.

#### Facility Placement

PEF will continue to use front lot construction for all new distribution facilities and all replacements of distribution facilities unless a specific operational, safety, or other site-specific reason exists for not using such construction at a given location. In the updated plan, PEF provided its Distribution Engineering Manual as an aid to facilitate a better understanding of its construction method.

#### Deployment Strategies

Facilities Affected, Including Specifications and Standards – PEF previously engaged industry expert Davies Consulting to develop a comprehensive prioritization model that has helped PEF identify potential hardening projects, procedures, and strategies. The model has since been improved and enhanced to better reflect the changes in PEF's overall storm hardening strategy. Geo Media has also been incorporated into this model. As more data becomes available, PEF proposes to continue to adjust its prioritization model as appropriate. PEF proposes adding feeder ties to its plan as a hardening alternative. Feeder ties connect feeders together to allow for service to be switched from one feeder to another. This method will increase flexibility and minimize the duration of customer outages.

Areas of Infrastructure Improvements – PEF's updated plan provides a detailed description of communities and areas where electric infrastructure improvements will be made, including facilities identified by the utility as critical infrastructure and facilities along major thoroughfares.

Joint-Use Facilities – PEF will continue performing joint-use pole loading analyses on an eight-year cycle in conjunction with its wooden pole inspection program and annual partial system audits of pole attachments. PEF will continue to meet with all joint-use attachers and provide attachers with information on where specific hardening projects are taking place and any cost or impact to those joint-use attachers.

Utility Cost/Benefit Estimates – PEF provided estimates of costs to be incurred in connection to its updated plan. However, no quantification of benefits was included in its filing. PEF asserts that since no major storms have impacted its service territory since plan implementation, the Company has minimal evidence of improved network performance due to storm hardening projects. Attachment B contains a comparison of PEF's costs associated with implementation of its approved and updated storm hardening plans.



Attachers Cost/Benefit Estimates – PEF provided its Joint-Use Pole Attachment Guidelines with its updated plan. The report details contractual agreements, permits, pole attachment and overlash attachment procedures, costs, and other guidelines.

Attachment Standards and Procedures

PEF's updated plan includes written Attachment Standards and Procedures addressing safety, reliability, pole loading capacity, and engineering standards and procedures for attachments by others to the utility's electric transmission and distribution poles. These standards meet or exceed those of the NESC pursuant to Rule 25-6.034, F.A.C.

Conclusion

PEF's updated plan is largely a continuation of its current, Commission-approved plan. Since Florida has not been affected by any named storms in the past few years, data are not available to evaluate the effects of hardening efforts on PEF's infrastructure. However, PEF is taking proactive steps to improve its system to withstand severe weather events and thus presents a reasonable approach to storm hardening that has the potential to enhance reliability and reduce restoration costs and outage times. Therefore, we approve PEF's updated storm hardening plan.

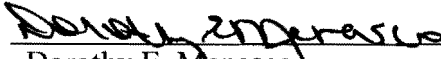
Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that Progress Energy Florida, Inc.'s Storm Hardening Plan is hereby approved as set forth in this Order. It is further

ORDERED that if no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the order, this docket should be closed upon the issuance of a consummating order.

By ORDER of the Florida Public Service Commission this 15th day of November, 2010.

ANN COLE  
Commission Clerk

By:   
Dorothy E. Menasco  
Chief Deputy Commission Clerk

( S E A L )

LCB

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing that is available under Section 120.57, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing will be granted or result in the relief sought.

Mediation may be available on a case-by-case basis. If mediation is conducted, it does not affect a substantially interested person's right to a hearing.

The action proposed herein is preliminary in nature. Any person whose substantial interests are affected by the action proposed by this order may file a petition for a formal proceeding, in the form provided by Rule 28-106.201, Florida Administrative Code. This petition must be received by the Office of Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on December 6, 2010.

In the absence of such a petition, this order shall become final and effective upon the issuance of a Consummating Order.

Any objection or protest filed in this/these docket(s) before the issuance date of this order is considered abandoned unless it satisfies the foregoing conditions and is renewed within the specified protest period.

**Storm Hardening Requirements: Wooden Pole Inspection Program & 10 Initiatives**

**Eight-Year Wooden Pole Inspection Program**

1. Implement an eight-year wooden pole inspection cycle by Order Nos. PSC-06-0144-PAA-EI, PSC-07-0078-PAA-EU.
2. File an annual report with the Commission.
3. Provide cost estimates.

**Initiative 1- A Three-Year Vegetation Management Cycle for Distribution Circuits**

1. Three-year tree trim cycle for primary feeders (minimum).
2. Three-year cycle for laterals as well, if not cost-prohibitive.
3. Provide cost estimate.

**Initiative 2- Audit of Joint-Use Attachment Agreements**

1. (a) Each investor-owned electric utility shall develop a plan for auditing joint-use agreements that includes pole strength assessments.  
(b) These audits shall include both poles owned by the electric utility and poles owned by other utilities to which the electric utility has attached its electrical equipment.
2. The location of each pole, the type and ownership of the facilities attached, and the age of the pole and the attachments to it should be identified.
3. Each investor-owned utility shall verify that such attachments have been made pursuant to a current joint-use agreement.
4. Stress calculations shall be made to ensure that each joint-use pole is not overloaded or approaching overloading for instances not already addressed by Order No. PSC-06-0144-PAA-EI.
5. Provide compliance cost estimate and cost estimate for alternative action, if any.

**Initiative 3- Six-Year Transmission Inspection Program**

1. Develop a plan to fully inspect all transmission towers and other transmission supporting equipment (such as insulators, guying, grounding, splices, cross-braces, bolts, etc.).
2. Develop a plan to fully inspect all substations (including relay, capacitor, and switching stations).
3. Provide compliance cost estimate and cost estimate for alternative actions, if any.

**Initiative 4- Hardening of Existing Transmission Structures**

1. Develop a plan to upgrade and replace existing transmission structures. Provide a scope of activity, limiting factors, and criteria for selecting structure to upgrade and replace.
2. Provide a timeline for implementation.
3. Provide compliance cost estimate and cost estimate for alternative actions, if any.

**Initiative 5- Transmission and Distribution Geographic Information System**

1. To conduct forensic review.
  2. To assess the performance of underground systems relative to overhead systems.
  3. To determine whether appropriate maintenance has been performed.
  4. To evaluate storm hardening options.
  5. Provide a timeline for implementation.
- The utilities have the flexibility to propose a methodology that is efficient and cost-effective.

**Initiative 6- Post-Storm Data Collection and Forensic Analysis**

1. Develop a program that collects post-storm information for performing forensic analyses.
  2. Provide a timeline for implementation.
- The utilities have the flexibility to propose a methodology that is efficient and cost-effective.

**Initiative 7- Collection of Detailed Outage Data Differentiating between the Reliability Performance of Overhead and Underground Systems**

1. Collect specific storm performance data that differentiates between overhead and underground systems, to determine the percentage of storm-caused outages that occur on overhead and underground systems, and to assess the performance and failure mode of competing technologies, such as direct bury cable versus cable-in-conduit, concrete poles versus wooden poles, location factors such as front-lot versus back-lot, and pad-mounted versus vault.
  2. Provide a timeline for implementation.
- The utilities have the flexibility to propose a methodology that is efficient and cost-effective.

**Initiative 8- Increased Coordination with Local Governments**

1. Each utility should actively work with local communities year-round to identify and address issues of common concern, including the period following a severe storm like a hurricane and also ongoing, multihazard infrastructure issues such as flood zones, areas prone to wind damage, development trends in land use and coastal development, joint-use of public right-of-way, undergrounding facilities, tree trimming, and long-range planning and coordination.
2. Incremental plan costs.

**Initiative 9-Collaborative Research**

1. Must establish a plan that increases collaborative research.
2. Must identify collaborative research objective.
3. Must solicit municipals, cooperatives, educational and research institutions.
4. Must establish a timeline for implementation.
5. Must identify the incremental costs necessary to fund the organization and perform the research.

**Initiative 10- A Natural Disaster Preparedness and Recovery Program**

1. Develop a formal Natural Disaster Preparedness and Recovery Plan that outlines the utility's disaster recovery procedures if the utility does not already have one.

**Progress Energy Florida, Inc.**

<b>Eight-Year Wooden Pole Inspection Program</b>	
Current Plan	Updated Plan
1. Implement an eight-year wooden pole inspection cycle for distribution poles.	1. No change
2. File the progress of this inspection in the Annual Reliability Report.	2. No change
3. Costs for 2007-2009 were \$21,000,000, which include wooden pole inspection/treatment and replacement.	3. Costs for 2010 are estimated to be \$10,300,000, which include wooden pole inspection/treatment and replacement.

<b>Initiative 1- A Three-Year Vegetation Management Cycle for Distribution Circuits</b>	
Current Plan	Updated plan
1. Implement a three-year average trim cycle for feeders with targeted feeder trims based on prioritization.	1. No change
2. Implement an average five-year trim cycle for laterals.	2. No change
3. Costs for 2007-2009 were \$70,995,132.	3. Costs for 2010 are estimated to be \$12,800,000.

<b>Initiative 2- Audit of Joint-Use Attachment Agreements</b>	
Current plan	Updated plan
1. (a) Perform a Comprehensive Loading Analysis and annual partial system audits.	1. (a) No change
(b) Audit all PEF-owned and joint-use poles during eight-year wooden pole inspection cycle.	(b) No change
2. All required data collected on select poles and stored in electronic format.	2. No change
3. Verify attachments have been made pursuant to current joint-use agreement.	3. No change
4. Stress calculations performed on select poles during eight-year wooden pole inspection cycle.	4. No change
5. Costs for 2007-2009 were \$1,481,744.	5. Costs for 2010-2012 are unknown at this time.

<b>Initiative 3- Six-Year Transmission Inspection Program</b>	
Current plan	Updated Plan
1. Inspection program is a multi-pronged approach with inspection cycles of one, six or eight years depending on the goals or requirements of the individual inspection activity.	1. No change
2. Annual substation inspections.	2. No change
3. Costs for 2007-2009 were \$6,707,718 while an additional \$42,017,258 was spent on other transmission inspections and maintenance.	3. Costs for 2010 are estimated to be \$14,175,025. This estimate includes transmission circuits and substation inspections.

<b>Initiative 4- Hardening of Existing Transmission Structures</b>	
Current plan	Updated Plan
1. Incremental upgrades during relocations, replacement of existing wooden transmission poles, and other maintenance.	1. No change
2. Plan completed in 10 or more years starting in 2007.	2. No change
3. Costs for 2007-2009 transmission hardening projects were \$286,844,416.	3. Cost for 2010 are estimated to be \$103.2 M.

<b>Initiative 5- Transmission and Distribution Geographic Information System</b>	
Current plan	Updated Plan
1. Plan includes forensic review.	1. No change
2. Plan includes underground system relative to overhead.	2. No change
3. Plan includes determination of appropriate maintenance.	3. No change
4. Plan includes evaluation of storm hardening options.	4. No change
5. In 2008, PEF transitioned to a new G-electric system and retired the old FRAMME GIS system.	5. Continue use of the new system

<b>Initiative 6- Post-Storm Data Collection and Forensic Analysis</b>	
Current plan	Updated Plan
1. PEF has forensic teams in place and will collect and analyze samples.	1. No change
2. Plan continues to be implemented as severe weather events occur.	2. No change

<b>Initiative 7- Collection of Detailed Outage Data Differentiating between the Reliability Performance of Overhead and Underground Systems</b>	
Current plan	Updated Plan
1. PEF's Storm Preparedness Plan has been initiated.	1. No change
2. Implement in 2007. Storm performance results are obtained from PEF's GIS.	2. No change

<b>Initiative 8- Increased Coordination with Local Governments</b>	
Current plan	Updated Plan
1. PEF focuses on year-round communication with local governments. In addition, PEF implements meetings to discuss city and county projects.	1. No change
2. Costs for 2007-2009 are unknown at this time.	3. Costs for 2010-2012 were not provided.

<b>Initiative 9-Collaborative Research</b>	
Current Plan	Updated Plan
1. Collaborative research efforts, led by PURC, which began in 2007.	1. No change
2. Research vegetation management during storm and non-storm times, wind during storm and non-storm events, and hurricane and damage modeling towards further understanding the costs and benefits of undergrounding.	2. No change
3. PEF will solicit participation from other utilities and organizations.	3. No change
4. Implementation is ongoing	4. PEF has entered into a Memorandum of Understanding with the University of Florida's PURC, which extends research through December 31, 2011.
5. Costs for 2007-2009 were not provided.	5. Costs for 2010-2012 were not provided.



<b>Initiative 10- A Natural Disaster Preparedness and Recovery Program</b>	
<b>Current Plan</b>	<b>Updated Plan</b>
Disaster Preparedness/Recovery Plan has been developed and filed.	Continue to refine

### **Glossary**

1. Annual Electric Utility Distribution Reliability Report – A report, required by Rule 25-6.0455, Florida Administrative Code (F.A.C.), that contains data pertaining to distribution reliability. In the report, each utility is to provide information regarding established service reliability metrics or indices that are intended to reflect changes over time in system average performance, and sub-regional performance.
2. Extreme Wind Loading (EWL) – A construction standard defined by NESC section 25, Rule 250C. This standard details loading requirements for Grade B and Grade C construction and maps EWL standards for regions in North America.
3. Florida Emergency Operation Center (EOC) – A central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management, or disaster management functions at a strategic level in an emergency situation, and ensuring the continuity of operation of a company, political subdivision or other organization.
4. Geographic Information Systems (GIS) – Any system that captures, stores, analyzes, manages, and presents data that are linked to locations.
5. Grade B Construction – In general, the National Electric Safety Code classifies Grade B construction as the highest construction grade and it is used for all supply circuits crossing over railroad tracks; for open-wire supply circuits of over 7500 volts (V) or constant-current circuits exceeding 7.5 amperes (A) where crossing over communication circuits; and in urban and suburban districts.
6. Grade C Construction – Grade C is typically the National Electric Safety Code minimum standard for most electrical distribution facilities. Grade C is specified for open-wire supply circuits of over 7,500V in rural districts where crossing over or in conflict with supply circuits of 0 to 750V, excluding services; and for open-wire supply circuits of 750V to 7,500V in urban districts under nearly all conditions except as noted for Grade B construction, and also where crossing over or in conflict with communication circuits.
7. Investor-Owned Electric Utilities (IOUs) – Utilities that are privately owned and organized as a tax paying business, usually financed by the sale of securities in the capital markets. There are five investor-owned electric utilities in Florida.
8. Mid-Cycle Trimming (also known as hot spot trimming, proactive trimming, etc) – Vegetation (e.g., tree) trimming that occurs outside of a regular schedule or cycle.

9. National Electric Safety Code (NESC) – Safety standards published exclusively by IEEE. The 2007 National Electric Safety Code, approved June 16, 2006 by the American National Standards Institute (ANSI), covers basic provisions for safeguarding of persons from hazards arising from the installation, operation, or maintenance of (1) conductors and equipment in electric supply stations, and (2) overhead and underground electric supply and communication lines. It also includes work rules for the construction, maintenance, and operation of electric supply and communication lines and equipment. The standards are applicable to the systems and equipment operated by utilities, or similar systems and equipment, of an industrial establishment or complex under control of qualified persons.

10. Public Utility Research Center (PURC) – A research institute located at the University of Florida. PURC is an internationally recognized academic center dedicated to research and providing training in utility regulation and strategy, as well as the development of leadership in infrastructure policy.