

State of Florida



## Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

**DATE:** June 7, 2007

**TO:** Office of Commission Clerk (Cole)

**FROM:** Division of Economic Regulation (Breman, Ballinger, Draper, Kummer, Lewis, McNulty, Wilson)  
Division of Competitive Markets & Enforcement (Fisher, Harvey, Moses, Salak, Vinson)  
Division of Regulatory Compliance & Consumer Assistance (Mills)  
Office of the General Counsel (Holley, Young, Teitzman, Mann)

**RE:** Docket No. 070297-EI – Review of 2007 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342, Florida Administrative Code, submitted by Tampa Electric Company.

Docket No. 070298-EI – Review of 2007 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342, Florida Administrative Code, submitted by Progress Energy Florida, Inc.

Docket No. 070299-EI – Review of 2007 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342, Florida Administrative Code, submitted by Gulf Power Company.

Docket No. 070300-EI – Review of 2007 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342, Florida Administrative Code, submitted by Florida Public Utilities Company.

Docket No. 070301-EI – Review of 2007 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342, Florida Administrative Code, submitted by Florida Power & Light Company.

**AGENDA:** 06/19/07 – Regular Agenda – Proposed Agency Action for Issue 2 - Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Argenziano

Date: June 7, 2007

**CRITICAL DATES:** 08/02/07 (90-Day Statutory Deadline for Petition for Waiver – Issue 2)

**SPECIAL INSTRUCTIONS:** None

**FILE NAME AND LOCATION:** S:\PSC\ECR\WP\070297.RCM.DOC

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### **Case Background**

In order to address the vulnerabilities of the State of Florida's electric distribution and transmission system to powerful storms, the Commission initiated a multi-faceted approach to address storm preparation and has made significant progress. One area pursued by the Commission is "storm hardening." Storm hardening entails upgraded design and construction practices, as well as maintenance practices, so that electric facilities are better able to withstand extreme weather such as high wind speeds and flooding. The purpose of implementing storm hardening activities is to reduce outages from storms and lower the cost of restoring service. The Commission initiated several proceedings directed at providing a higher level of preparedness and hardening of the electric infrastructure throughout the state to prepare for future storm events. In one of the rulemaking proceedings, the Commission adopted Rule 25-6.0342, Florida Administrative Code, which requires each investor-owned utility (IOU) to file a comprehensive storm hardening plan for review and approval by the Commission. The plans filed by each IOU pursuant to that rule are the subject of this recommendation.<sup>1</sup>

#### **Rule 25-6.0342, Florida Administrative Code - Electric Infrastructure Storm Hardening**

During its February 27, 2006, Internal Affairs conference, the Commission directed staff to initiate rulemaking to adopt distribution construction standards that are more stringent than the minimum safety requirements of the National Electrical Safety Code. In response to that decision, Docket No. 060173-EU was established on March 1, 2006.

Rule 25-6.0342, Florida Administrative Code, became effective on February 1, 2007.<sup>2</sup> Pursuant to the rule, each IOU is required to file a comprehensive storm hardening plan for review and approval by the Commission. The rule required the IOUs to file storm hardening plans by May 7, 2007, and every three years thereafter. Upon petition or on its own motion, the Commission may review and approve changes to the storm hardening plans more frequently than every three years.

Pursuant to the rule, each IOUs' storm hardening plan is explicitly required to address all the key elements associated with facility hardening, including:

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<sup>1</sup> A summary of the Commission's other actions regarding storm hardening is included in Appendix A to this recommendation.

<sup>2</sup> The full text of Rule 25-6.0342, Florida Administrative Code, is provided in Appendix B to this recommendation.

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- Compliance, at a minimum, with the National Electrical Safety Code.
- The applicability of extreme wind loading standards for new and replacement distribution facilities.
- Mitigation of damage to underground facilities and supporting overhead facilities due to flooding and storm surges.
- Safe and efficient access for the installation and maintenance of new and replacement distribution facilities.

The plans must also include a detailed explanation of each utility's deployment strategy. Each plan must contain a description of the facilities affected and the technical design specifications, standards, and construction methodologies to be used. The communities and areas within the utility's service area affected by the plan must be identified. Critical infrastructure must also be defined.

To gain Commission approval of its storm hardening plan, each IOU must demonstrate that its plan is prudent, practical, and cost-effective for all affected parties, including third-party attachers. Each storm hardening plan must identify the extent to which collocation facilities are affected. Attachment Standards and Procedures governing the safety, reliability, pole loading capacity, and engineering standards and procedures for third-party attachments must be included. Each plan must contain an estimate of the costs and benefits to the IOU, such as reductions in storm restoration costs and outages. Further, each plan must provide an estimate of the costs and benefits to third-party attachers, with such information to be provided to the IOU by the affected third-party attachers.

When it approved Rule 25-6.0342, Florida Administrative Code, the Commission found that requiring the IOUs to submit storm hardening plans for approval will meet the objectives of enhancing reliability and reducing restoration costs and outage times. At the same time, the concerns over potential undue cost incurrence by or cost shifting to third-party attachers would be fully addressed by the Commission.

On May 7, 2007, Florida Power & Light Company (FPL), Progress Energy Florida, Inc., (PEF), Tampa Electric Company (TECO), and Gulf Power Company (Gulf) filed their 2007 Electric Infrastructure Storm Hardening Plans (Storm Hardening Plan). On May 4, 2007, Florida Public Utilities Company (FPUC) filed a Petition for Variance from Rule 25-6.0342(2), Florida Administrative Code, seeking an additional 60 days to file its Storm Hardening Plan. Docket Nos. 070297-EI (TECO), 070298-EI (PEF), 070299-EI (Gulf), 070300-EI (FPUC), and 070301-EI (FPL) were opened to address each filing.

On May 14, 2007, staff issued a Request for Preliminary Comments from Interested Persons and Third-Party Attachers regarding the plans filed by the companies. Response to staff's request was voluntary. Comments were received from the following entities:

- TECO (Docket No. 070297-EI) – Verizon Florida LLC, BellSouth Communications d/b/a AT&T Florida and TCG South Florida, Inc., Embarq Florida, Inc., Florida Cable Telecommunication Association, Inc., and Time Warner of Florida, LLP.

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- PEF (Docket No. 070298-EI) – Verizon Florida LLC, BellSouth Communications d/b/a AT&T Florida, Embarq Florida, Inc., Florida Cable Telecommunication Association, Inc., and Time Warner of Florida, LLP.
- Gulf (Docket No. 070299-EI) –the City of Panama City Beach and the Panama City Beach Community Redevelopment Agency, BellSouth Communications d/b/a AT&T Florida, Embarq Florida, Inc., and Florida Cable Telecommunication Association, Inc.
- FPUC (Docket No. 070300-EI) – BellSouth Communications d/b/a AT&T Florida
- FPL – (Docket No. 070301-EI) – Verizon Florida LLC, the Municipal Underground Utilities Consortium, the Town of Palm Beach, the Town of Jupiter Island, BellSouth Communications d/b/a AT&T Florida, Embarq Florida, Inc., Florida Cable Telecommunication Association, Inc., and Time Warner of Florida, LLP.

On May 25, 2007, the City of Panama City Beach and the Panama City Beach Community Redevelopment Agency filed a Petition to Intervene in Docket No. 070299-EI (Gulf); on May 25, 2007, the Town of Palm Beach and the Town of Jupiter Island each filed a Petition to Intervene in Docket No. 070301-EI (FPL); On May 29, 2007, Verizon Florida LLC filed separate Petitions to Intervene in Docket Nos. 070297-EI (TECO), 070298-EI (PEF), and 070301-EI (FPL); on May 30, 2007, BellSouth Communications d/b/a AT&T Florida and TCG South Florida, Inc. filed a Petition to Intervene in Docket No. 070297-EI (TECO); and also on May 30, 2007, BellSouth Communications d/b/a AT&T Florida filed Petitions to Intervene in Docket Nos. 070298-EI (PEF), 070299-EI (Gulf), 070300-EI (FPUC), and 070301-EI (FPL).

This recommendation addresses whether Docket Nos. 070297-EI, 070298-EI, 070299-EI, and 070301-EI should be scheduled directly for a formal administrative hearing and addresses whether FPUC's Petition for Variance should be granted. This recommendation also provides a preliminary analysis of each IOUs' Storm Hardening Plan, and identifies areas where staff believes further support may be necessary to verify that the scope of the plan satisfies the intent of Rule 25-6.0342, Florida Administrative Code. The Commission has jurisdiction to address these matters pursuant to Sections 366.04 and 366.05, Florida Statutes.

### **Discussion of Issues**

**Issue 1:** Should Docket Nos. 070297-EI, 070298-EI, 070299-EI, and 070301-EI be scheduled directly for a formal administrative hearing?

**Recommendation:** Yes. Additional support for each Storm Hardening Plans will be necessary to verify that the scope of each Storm Hardening Plan satisfies the intent of Rule 25-6.0342, Florida Administrative Code. Docket Nos. 070297-EI, 070298-EI, 070299-EI, and 070301-EI should be scheduled directly for a formal administrative hearing, thereby allowing staff to conduct formal discovery and to ensure adequate participation by intervenors and third-party attachers. As part of the hearing process, staff should conduct a series of informal workshops to allow parties and staff to identify disputed issues and potential areas for stipulation. (Breman, Wilson, Holley, Young)

**Staff Analysis:** Pursuant to Rule 25-6.0342, Florida Administrative Code, FPL, PEF, TECO, and GULF each filed its Storm Hardening Plan on May 7, 2007. Each utility's Storm Hardening Plan incorporates its respective reliability report filed March 1, 2007, as required by Rule 25-6.0455, Florida Administrative Code. On May 4, 2007, FPUC filed a Petition for Variance from Rule 25-6.0342(2), Florida Administrative Code, seeking an additional 60 days to provide its Storm Hardening Plan, which is addressed in Issue 2.

Table 1 is a summary of the elements contained in each of the filed Storm Hardening Plans. In addition, an analysis of each Plan is provided that identifies areas where staff believes further support may be necessary to verify that the scope of the plan satisfies the intent of Rule 25-6.0342, Florida Administrative Code.

**TABLE 1**  
**Rule 25-6.0342 F.A.C. Compliance Filings and Summary**

<b>UTILITY PLAN COMPONENTS</b>	<b><u>FPL</u></b>	<b><u>PEF</u></b>	<b><u>TECO</u></b>	<b><u>GULF</u></b>
<b>Extreme Wind Loading (EWL)</b>	Adopted for all existing and new feeders and laterals serving Critical Infrastructure Facilities.	Not adopted system wide.	Experimental basis on three feeders serving Critical Infrastructure Facilities only.	Adopted for all existing and new feeders and laterals serving Critical Infrastructure Facilities.
<b>Incremental Hardening</b>	Targeted existing feeders – initial focus on Community Projects.	Initial projects PEF identified using its AIS model and/or storm experiences.	Consists of implementing the Commission’s 10 initiatives.	Targeting 11 existing sites over 3 years.
<b>Design Guidelines</b>	Applying EWL to all new overhead facilities, major planned work, relocations, and daily work activities. Focus on pole class, pole type, and span lengths.	PEF’s default distribution design criteria is 60 mph (NESC Grade C) unless otherwise explicitly required by the NESC (Grade B = 116 mph). Applying the Asset Investment Strategy Model.	Applying NESC construction grade B (116 mph).	GULF’s default distribution wind loading design criteria is 60 mph (NESC Grade C) unless otherwise explicitly required by the NESC. Applying EWL to only Critical Infrastructure Facilities.
<b>Distribution Projects</b>	2007: 145 circuit miles. Costs ranging from \$40 to \$70 million. 2008: 300-600 miles 2008: \$75-\$125million 2009: \$100-\$150 million	Multiple projects 2007: \$43 million 2008: \$43 million 2009: \$43 million	2007: 3-5 projects, total costs: \$1million 2008 and 2009: Continued 2007 projects and includes 2 new projects. \$1million in 2008; \$1million in 2009.	2007: 149 poles, total costs: \$523,000. 2008 and 2009: Additional 140 and 161 poles. \$499,229 in 2008; \$563,479 in 2009.
<b>Transmission Projects</b>	Replace single pole un-guyed wood transmission structures and ceramic post insulators on concrete poles to meet higher standards. Replacement over 10-15 year period. Estimated cost from \$5-8 million; \$7 million for 2007.	Systemic changing out wood pole to either concrete or steel. 66 transmission projects listed for the next three years. Includes 20 governmental relocations. 2007: \$49 million 2008: \$56 million 2009: \$56 million	10 Commission initiatives - \$8 million annually	Ongoing 10 Commission initiatives.
<b>Third-Party Collaboration</b>	Dialog with Third-Parties occurred and modifications reflect consideration of input. Complete comments received from attaching entities attached and included in the Plan	Dialog with Third-Parties occurred. FCTA questions the sufficiency of the details provided and permitting requirements for overloading.	Dialog with Third-Parties omitted. Requirements and process is discussed.	Dialog with Third-Parties occurred. FCTA appears to believe GULF’s revised collocation process is excessive.
<b>Ten Point Initiatives part of Hardening Plan</b>	Yes	Yes	Yes	Yes

**Florida Power & Light Company's Plan (Docket No. 070301-EI)**

In its Storm Hardening Plan, FPL proposes to continue implementing pole inspections, the ten ongoing storm hardening initiatives already required by the Commission, and implementation of a new extreme wind loading (EWL) criteria throughout its service area for the distribution system. FPL proposes to establish three different EWL zones:

- A 145 miles per hour EWL zone for the following eight southern coastal counties: Broward, Dade, Collier, Indian River, Monroe, Palm Beach, and St Lucie.
- A 130 miles per hour EWL zone throughout FPL's central Florida counties of Alachua, Brevard, Charlotte, Clay, De Soto, Duval, Flagler, Glades, Hardee, Hendry, Highlands, Lee, Manatee, Nassau, Okeechobee, Osceola, Orange, Putnam, Sarasota, Seminole, St. Johns, and Volusia.
- A 105 miles per hour EWL zone for the extreme northern and inland counties of Baker, Bradford, Columbia, Suwannee, and Union.

FPL's focus is placed on upgrading electric distribution facilities serving critical infrastructure facilities (CIF). CIFs are identified in coordination with Florida's Emergency Operations Center and include hospitals, 911 centers, ports, special needs shelters, water treatment plants, fire stations, and similar sites. Additionally, FPL proposes incremental hardening of targeted electrical facilities that are located at key locations such as interstate crossings, grocery stores, gas stations, pharmacies, and FPL control systems.

FPL's proposed design guidelines for distribution facilities apply the three EWL zone criteria to all new construction, major planned work, relocations, and daily work activities. FPL's distribution design guidelines implement its three EWL zone standard by using a designing toolkit that evaluates site specific costs for options such as stronger poles, shorter distances between poles, additional support guys, and underground construction. FPL's minimum construction standard will be Grade B as identified by the National Electrical Safety Code (NESC). Grade B construction is equivalent to designing for a wind load of 116 miles per hour.

Additionally, FPL's proposed plan requires continued implementation of the Commission's ten storm hardening initiatives and a wooden pole inspection program. FPL's plan for implementing these 11 activities has been reviewed by the Commission in Order Nos. PSC-06-0144-PAA-EI, PSC-07-0078-PAA-EU, PSC-06-781-PAA-EI, and PSC-06-0947-PAA-EI. FPL filed an update and status report to each of these activities on March 1, 2007. FPL's storm hardening plan incorporates the March 1, 2007, report by reference.

FPL clarified that the total estimated costs for implementing FPL's plan for 2007 range from \$160 to \$205 million based on a review of both the May 2007 and March 2007 filings. The range in cost estimates is dependent on the scope of EWL upgrade activities and post-inspection follow-up work associated with pole inspections and transmission facility inspections.

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**Cost Estimates for FPL's Proposed Storm Hardening Plan**

	Extreme Wind Loading (Dollars in Millions)	Implementing Storm Surge and Flooding Mitigation (Dollars in Millions)	Pole Inspections and Ten Other Hardening Initiatives (Dollars in Millions)	Estimated Total Cost (Dollars in Millions)	Number of Customers Year-End 2006	Estimated Plan Cost per Customer
2007	\$ 40 - \$ 70	\$0.5 - \$2	\$119.7 - \$133	\$160 - \$205	4,415,411	\$36 - \$46
2008	\$ 75 - \$125	Not Reported	Not Reported			
2009	\$100 - \$150	Not Reported	Not Reported			

**Staff's Preliminary Analysis**

Staff believes FPL should provide additional support of its Storm Hardening Plan in the following areas:

**Mitigation of Flood and Storm Surge Damages to Underground Facilities**

FPL identifies only two activities related to mitigating flood and storm surge damages and costs. One activity, on Jupiter Island, is a field test of a specific vendor's product. FPL's other activity is promotion of a pilot Governmental Adjustment Factor (GAF) tariff. Thus, staff believes FPL's plan is limited in scope and relies on a "trial-by-experience" approach because FPL's plan does not address a comprehensive proactive effort to assess options to mitigate flood and storm surge issues that impact underground electric infrastructure.

**Cost-effective Reduction of Storm Damage Costs and Outages**

FPL's report does not include an estimate of storm restoration cost reduction and an estimate of reduced storm caused outages. Staff believes FPL has the skills, expertise, and data to make estimates of potential reduction in storm restoration costs and outages that may occur in response to increases in various storm hardening options. Therefore, staff believes excluding estimated benefit data does not appear to be reasonable because FPL has the opportunity and the resources to make estimates of reduced storm restoration costs and outages.

In addition, FPL does not fully explain the process of how it will monitor the various programs and activities to ensure that the overarching goals of lower storm restoration costs and fewer storm outages are achieved economically. While certain aspects of verifying customer benefits depend on future storm experiences, it is possible to test elements of a utility's planned activities through simulated extreme weather events and thereby avoiding complete reliance on a "trial-by-experience" approach.

**Details of Storm Hardening Activities**

While FPL provides costs estimates of its EWL activities and transmission activities through 2009, FPL fails to separately identify ongoing costs to mitigate flood and storm surge impacts on underground systems, and costs beyond 2007 for other ongoing storm hardening initiatives. At a minimum, FPL should specifically provide the location, scope, and cost of each



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storm hardening project scheduled for 2007, as well as the criteria for selecting that site for storm hardening.

### Consideration of Input from Interested Parties

FPL solicited and considered input from collocated utilities and third-party attachers. Comment by these affected parties suggests to staff that the 90-day period set by rule may have limited the level of dialog between FPL and affected parties. FPL represents that dialog with these parties is ongoing. However, the nature of that dialog is primarily on aspects of the pole owner/attacher processes and is not expected to materially impact the scope of FPL's storm hardening activities.

### Operational Expense Differential Between Overhead and Underground Distribution Systems required for Calculation of Contribution-In-Aid-of-Construction (CIAC) pursuant to Rules 25-6.078 and 25-6.115, Florida Administrative Code

In its CIAC tariff docket, FPL represented that it would be providing operational expense differential between overhead and underground distribution systems in its May 7, 2007, Storm Hardening Plan. In the Order approving the CIAC tariff, the Commission acknowledged:

FPL states that its May 7, 2007, storm hardening plans will include standardized values to capture differences in operational costs between overhead and underground facilities. FPL states that until this Commission approves its operational costs, CIAC calculations do not include an amount to reflect operational costs... These issues can and likely will be raised in the near future, in a new docket, now that the May 7, 2007, storm hardening plans have been filed.

(See Order No. PSC-07-0442-TRF-EI, page 10) However, FPL's filed Storm Hardening Plan contains no support for assessing the operational expense differential between overhead and underground distribution systems, yet FPL asserts it has proposed a cost-effective plan. Staff believes FPL has the information necessary to determine the operation expense differential between FPL's overhead and underground systems, and should provide that information to the Commission.

### **Progress Energy Florida, Inc's Plan (Docket No. 070298-EI)**

PEF's plan proposes to continue implementing pole inspections, the ten ongoing storm hardening initiatives already required by the Commission, and maintaining its existing minimum distribution wind load design standard of NESC construction grade "C" (60 miles per hour) for distribution facilities throughout its service area.

PEF asserts there is no objective data supporting application of EWL criteria to electric distribution facilities. Thus, PEF proposes no change to its EWL criteria throughout its service area. Notwithstanding, PEF has proposed to convert nineteen existing major highway crossings from overhead facilities to underground facilities. This activity ensures that high wind events will not cause downed power lines that could impede use of major transportation routes. PEF also developed a proprietary project evaluation tool called Asset Investment Strategy (AIS)

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which is used to screen each project for potential storm hardening opportunities. The AIS tool may result in the expansion or modification of projects based on storm hardening benefits. PEF is using the AIS tool throughout its service area to ensure a systematic and analytical approach is used to deploy storm hardening options.

PEF's proposed design guidelines for distribution facilities apply the NESC construction Grade C as the standard throughout its service area. PEF's guidelines also require implementing Grade B construction (116 miles per hour wind loading) consistent with the requirements of the NESC. Any change from these standards must be supported by an analysis using the AIS tool.

PEF's estimated costs for implementing the plan for 2007 through 2009 are \$91 million, \$98.7 million, and \$99.3 million, respectively. PEF's filing does not separately identify EWL and underground project costs from general storm hardening costs.

**Cost Estimates for PEF's Proposed Storm Hardening Plan**

	Extreme Wind Loading  (Dollars in Millions)	Implementing Storm Surge and Flooding Mitigation (Dollars in Millions)	Pole Inspections and Ten Other Hardening Initiatives (Dollars in Millions)	Transmission & Distribution Hardening (Dollars in Millions)	Estimated Total Cost  (Dollars in Millions)	Number of Customers Year-End 2006	Estimated Plan Cost per Customer
2007	Not Reported	Not Reported	\$42.6	\$48.6	\$91	1,615,514	\$56
2008	Not Reported	Not Reported	\$42.8	\$55.9	\$99		
2009	Not Reported	Not Reported	\$43.2	\$56.1	\$99		

**Staff's Preliminary Analysis**

Staff believes PEF should provide additional support of its Storm Hardening Plan in the following areas:

**Extreme Wind Load Criteria**

Staff believes substantive support for PEF's 60 mile per hour wind speed loading criteria has not been justified. PEF's Storm Hardening Plan generally refers to its historical field experiences and that PEF has plans to gain more experience. However, PEF does not address any specific efforts to verify or test its proposition that a 60 mile per hour wind speed loading criteria is appropriate for all of its service area. Thus, staff is not convinced that PEF's plan adequately addresses an EWL criteria for PEF's service area. This is of specific concern because adjacent utilities, FPL and TECO, support a minimum extreme wind load criteria of 116 miles per hour in areas where PEF's service area abuts that of the other utility's service area. Additionally, staff notes that PEF sustained higher damage costs on a per customer basis than either FPL or TECO.

2004 Self-Insured Storm Damage Impact  
 FPL, PEF, TECO, and Gulf

	<b>Charley (Millions)</b>	<b>Frances (Millions)</b>	<b>Ivan (Millions)</b>	<b>Jeanne (Millions)</b>	<b>Total (Millions)</b>	<b>Millions of Customers</b>	<b>Cost per Customer</b>
FPL	\$ 209	\$267	\$ 0	\$234	\$ 710	4.4	\$161
PEF	\$ 146	\$129	\$ 6	\$ 86	\$ 367	1.6	\$229
TECO	\$ 14	\$ 23	\$ 0	\$ 28	\$ 65	0.7	\$93
GULF	\$ 0	\$ 0	\$ 134	\$ 0	\$ 134	0.4	\$335

Sources: Docket No. 041291-EI for FPL; Docket No. 041272-EI for PEF; and answers to staff data requests for TECOO and Gulf.

While there are many factors contributing to the level of storm damage experienced by each of these utilities, PEF's filings do not provide conclusive support for a lower EWL criteria than neighboring utilities which serve in areas that experience equivalent extreme wind speeds.

Mitigation of Flood and Storm Surge Damages to Underground Facilities

PEF's plan appears to discourage use of underground in locations at risk for storm surge and flooding. Underground construction is promoted only in areas exposed to minor storm surge and/or short term water intrusion. While PEF generically discusses the use of its AIS to promote storm hardened underground facilities, PEF failed to state the specific scope and cost of its storm hardening activities.

Identification of Storm Hardening Activities Resultant Costs and Benefits

Staff believes the scope and costs of PEF's storm hardening activities are not clearly stated. PEF's plan does not identify the incremental storm hardening activities, resultant costs, and benefits that PEF implements through the use of its proprietary project evaluation tool, AIS. Instead, PEF's storm hardening activities appears to include all projects and resultant company incurred costs for customer requests, governmental improvements, purchases of other utility facilities, growth spurred conductor upgrades, and new facilities required to address growth.

Staff believes PEF has the skills, expertise, and data to make estimates of potential reduction in storm restoration costs and outages that may occur in response to increases in various storm hardening options. PEF's implementation of its AIS planning tool appears to demonstrate PEF's ability to estimate benefits resulting from storm hardening. Therefore, staff believes excluding estimated benefit data and assessment of an EWL criterion does not appear to be reasonable because PEF has the opportunity and the resources to make estimates of reduced storm restoration costs and outages.

Cost-Effective Reduction of Storm Damage Costs and Outages

The cost-effectiveness of PEF's proposed Storm Hardening Plan is not fully supported because PEF's costs per customer are higher than other utilities and its EWL criterion is lower

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than other utilities. As noted, PEF is not proposing any changes to its EWL criteria and has not identified substantive increases promoting underground facilities. Nevertheless, PEF's cost estimates, on a per customer basis, of \$56 exceed that of FPL (\$36-\$46) and TECO (\$37). Both FPL and TECO are promoting a more robust wind standard than PEF. Therefore, it appears that PEF may be proposing higher cost programs to achieve a less robust electric infrastructure system compared to other utilities.

In general, certain aspects of verifying customer benefits depend on future storm experiences. Nevertheless, it is also possible to test elements of PEF's planned activities through simulated extreme weather events and thereby avoiding complete reliance on a "trial-by-experience" approach. Thus, staff believes PEF's plan does not adequately discuss a feed-back mechanism that ensures that the overarching goals of lower storm restoration costs and fewer storm outages are achieved economically.

#### Details of Storm Hardening Activities

Like the other utilities, PEF has not explicitly provided all cost components for deploying the plan. While PEF provided cost estimates of its activities through 2009, PEF failed to separately identify ongoing costs to mitigate flood and storm surge impacts on underground systems and costs for extreme wind criteria. Staff believes PEF needs to provide site specific details for its proposed storm hardening activities. At a minimum, PEF should specifically show the location, scope, and cost of each storm hardening project scheduled for 2007 as well as the criteria for selecting that site for storm hardening.

#### Consideration of Input from Interested Parties

PEF solicited and considered input from collocated utilities and third-party attachers. Comment by these affected parties suggests to staff that the 90-day period set by rule may have limited the level of dialog between PEF and affected parties. PEF asserts that dialog with these parties is ongoing. However, the nature of that dialog focuses on aspects of the pole owner/attacher processes, which staff believes is not expected to materially impact the scope of PEF's storm hardening activities.

#### Operational Expense Differential Between Overhead and Underground Distribution Systems required for Calculation of Contribution-In-Aid-of-Construction (CIAC) pursuant to Rules 25-6.078 and 25-6.115, Florida Administrative Code

PEF's filed plan contains no support for assessing the operational expense differential between overhead and underground distribution systems. PEF asserts it has proposed a cost-effective plan. Thus, staff believes PEF has the information necessary to determine the operational expense differential between PEF's overhead and underground systems.

#### **Tampa Electric Company's Plan (Docket No. 070297-EI)**

TECO's plan proposes to continue implementing pole inspections, the ten ongoing storm hardening initiatives already required by the Commission, and maintaining its existing minimum

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distribution wind load design standard of NESC construction grade “B” (116 miles per hour) for distribution facilities throughout its service area.

TECO’s service area, pursuant to the NESC Figure 250(d), has a history of extreme high wind speeds ranging between 110 and 120 miles per hour. TECO reviewed a 150 year history of hurricane events and tropical storms for wind speeds within its service area and found that the maximum sustained wind speed was 115 miles per hour. Thus, TECO concluded that their current EWL criterion is reasonable and should be maintained. However, TECO proposes to implement various site specific storm hardening projects that are focused on certain critical infrastructure.

TECO’s proposed projects include testing and improving its downtown Tampa underground network for flood conditions and upgrading various old 4KV distribution circuits to current 13KV standards. TECO also plans to convert twelve existing major highway crossings from overhead distribution facilities to underground facilities and upgrade electric facilities serving the Port of Tampa, St. Joseph’s Hospital, and the Tampa International Airport.

**Cost Estimates for TECO’s Proposed Storm Hardening Plan**

	Extreme Wind Loading	Implementing Storm Surge and Flooding Mitigation	Pole Inspections and Ten Other Hardening Initiatives	Transmission & Distribution Hardening	Number of Customers Year-End 2006	Estimated Plan Cost per Customer
2007	\$760,000	\$20,000	\$23,177,000	\$242,000	662,511	\$37
2008	\$310,000	\$20,000	\$26,461,000	\$680,000		
2009	\$858,000	\$20,000	\$27,360,000	\$200,000		

TECO’s estimated costs for implementing the plan for 2007 through 2009 are \$24.2 million, \$27.5 million, and \$28.4 million, respectively. The costs for storm surge and flood mitigation are those estimated for TECO’s downtown Tampa network project. The costs for EWL are those estimated for TECO’s planned activities at the Port of Tampa, St. Joseph’s Hospital, and the Tampa International Airport. TECO’s planned upgrade of its 4KV circuits and planned conversions to underground crossing of interstate highways are included in the amount shown for transmission and distribution hardening projects.

**Staff’s Preliminary Analysis**

Staff believes TECO should provide additional support of its Storm Hardening Plan in the following areas:

**Mitigation of Flood and Storm Surge Damages to Underground Facilities**

TECO’s plan, at pages 17 through 18, appears to discourage use of underground in coastal regions or regions prone to flooding or storm surge of 12 feet or larger which could occur during a category three hurricane. At page 11, TECO noted that its service area has experienced at least two category three hurricanes. However, TECO’s plan identifies only one activity related to mitigating flood and storm surge damages and costs which is the downtown Tampa network project.

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Staff believes TECO's efforts to mitigate flood and storm surge damages to underground facilities may be insufficient. Simply trying to discourage customers from pursuing such projects does not address mitigation of future storm damages. Customer requests can result in placing electrical facilities underground in high flood and surge risk areas. Also, TECO's project in downtown Tampa is limited and may only address highly urban areas. Staff's concern is that TECO's plan does not address efforts to mitigate damage to underground systems in cases where customers request to have underground systems in high flood or surge risk area.

#### Cost-Effective Reduction of Storm Damage Costs and Outages

Estimates of reduced storm restoration costs and outages are not quantified. Staff believes TECO has the skills, expertise, and data to make estimates of potential reduction in storm restoration costs and outages that may occur in response to increases in various storm hardening options. Therefore, staff believes excluding estimated benefit data does not appear to be reasonable because TECO has the opportunity and the resources to make estimates of reduced storm restoration costs and outages.

In general, certain aspects of verifying customer benefits depend on future storm experiences. Nevertheless, it is also possible to test elements of TECO's planned activities through simulated extreme weather events and thereby avoiding complete reliance on a "trial-by-experience" approach. Thus, staff believes TECO's plan does not adequately discuss a general feed-back mechanism that ensures the overarching goals of lower storm restoration costs and fewer storm outages are achieved economically.

#### Limited Storm Hardening of Critical Infrastructure

TECO's storm hardening of electric facilities serving critical infrastructure locations appears limited. Whether this is because TECO has been practicing an equivalent EWL criterion of 116 miles per hour is unclear. TECO's plan does not fully discuss its efforts to coordinate identification of critical infrastructure sites and how TECO makes its evaluations for storm hardening options on new construction, relocations, major rebuild projects, and daily activities.

#### Consideration of Input from Interested Parties

TECO solicited and considered input from collocated utilities and third-party attachers. While TECO's report does not discuss substantive considerations, TECO's petition and supplemental information is evidence that TECO took measures as required by the rule. Staff believes the 90-day period set by rule may have limited the level of dialog between TECO and affected parties. TECO represents that dialog with these parties is ongoing. However, the nature of that dialog is primarily on aspects of the pole owner/attacher processes and is not expected to materially impact the scope of TECO's storm hardening activities.

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Operational Expense Differential Between Overhead and Underground Distribution Systems required for Calculation of Contribution-In-Aid-of-Construction (CIAC) pursuant to Rules 25-6.078 and 25-6.115, Florida Administrative Code

TECO’s filed plan contains no support for assessing the operational expense differential between overhead and underground distribution systems. TECO asserts it has proposed a cost-effective plan. Thus, staff believes TECO has the information necessary to determine the operation expense differential between TECO’s overhead and underground systems.

**Gulf Power Company’s Plan (Docket No. 070299-EI)**

Gulf’s plan proposes to continue implementing pole inspections, the ten ongoing storm hardening initiatives already required by the Commission, and maintaining its existing minimum distribution wind load design standard of NESC construction grade “C” (60 miles per hour) for distribution facilities throughout its service area.

Gulf’s plan does not change its minimum wind loading design criterion because Gulf asserts it lacks the data to support the benefits associated with applying extreme wind load standards. Nevertheless, Gulf concluded that a targeted upgrade of facilities serving critical facilities was appropriate. Input from the County Emergency Operating Centers was used to identify key sites to be upgraded. Gulf’s Storm Hardening Plan includes a map that generally indicated where the selected sites are located and tables listing the impacted feeder circuit identification numbers, an estimate of the number of poles impacted, miles of facilities, and costs.

A key component of Gulf’s plan is continued implementation of the Commission’s ten storm hardening initiatives and pole inspection program which have been reviewed and approved by the Commission. Gulf filed an update and status report to each of these activities on March 1, 2007.

As filed, Gulf’s estimated costs for implementing the plan contained incremental costs. Gulf defines incremental costs as costs for activities or level of activities not contemplated when Gulf’s rates were last set. Gulf clarified that the incremental cost concept only applies to vegetation management, transmission structure inspections, and storm hardening of transmission structures. Staff notes that including the total costs for these three activities is consistent with cost estimates provided by other utilities. Each of Gulf’s cost estimates are provided in the table below.

**Cost Estimates for Gulf’s Proposed Storm Hardening Plan Using Incremental Costs**

	Extreme Wind Loading	Implementing Storm Surge and Flooding Mitigation	Pole Inspections and Ten Other Hardening Initiatives	Number of Customers Year-End 2006	Estimated Plan Cost per Customer
2007	\$523,610	Not Reported	\$3,687,000	418,892	\$10
2008	\$499,299	Not Reported	\$3,738,000		
2009	\$563,479	Not Reported	\$3,787,000		

**Cost Estimates for G Gulf's Proposed Storm Hardening Plan Using Total Costs**

	Extreme Wind Loading	Implementing Storm Surge and Flooding Mitigation	Pole Inspections and Ten Other Hardening Initiatives	Number of Customers Year-End 2006	Estimated Plan Cost per Customer
2007	\$523,610	Not Reported	\$10,560,691	418,892	\$26
2008	\$499,299	Not Reported	\$9,986,270		
2009	\$563,479	Not Reported	\$10,038,275		

**Staff's Preliminary Analysis**

Staff believes Gulf should provide additional support of its Storm Hardening Plan in the following areas:

**Extreme Wind Load Criteria**

Gulf did not provide substantive support for its 60 mile per hour wind speed loading criterion for distribution facilities. GULF appears to rely on the absence of benefit analysis data as support for its position. Prospectively, Gulf plans to use future storm performance assessments at its identified eleven projects to test its proposition that a 60 mile per hour wind speed loading criteria is appropriate for all of its service area. Staff believes this apparent "trial-by-experience" approach is not proactive. Staff also believes Gulf's approach does not materially reduce future storm restoration costs and outages that may occur within the next three years.

As shown in the table below, both Gulf and PEF, who support a lower wind speed design standard, sustained higher damage costs on a per customer basis than FPL or TECO. While there may be many factors contributing to the level of storm damage experienced by each of these utilities, Gulf's filings do not provide conclusive support for a lower wind design standard for areas within Gulf's service area that are known to experience wind speeds higher than 60 miles per hour as shown in Gulf's Appendix 1.

**2004 Self-Insured Storm Damage Impact  
 FPL, PEF, TECO, and Gulf  
 Net of Insurance Reimbursements**

	<b>Charley (Millions)</b>	<b>Frances (Millions)</b>	<b>Ivan (Millions)</b>	<b>Jeanne (Millions)</b>	<b>Total (Millions)</b>	<b>Millions of Customers</b>	<b>Cost per Customer</b>
FPL	\$ 209	\$267	\$ 0	\$234	\$ 710	4.4	\$161
PEF	\$ 146	\$129	\$ 6	\$ 86	\$ 367	1.6	\$229
TECO	\$ 14	\$ 23	\$ 0	\$ 28	\$ 65	0.7	\$93
GULF	\$ 0	\$ 0	\$ 134	\$ 0	\$ 134	0.4	\$335

Sources: Docket No. 041291-EI for FPL; Docket No. 041272-EI for PEF; and answers to staff data requests for TECO and Gulf.



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Staff believes Gulf's recent experiences during 2004 and 2005 demonstrates that Gulf's service area is likely to experience high wind speeds consistent with those shown in Gulf's filing, Appendix 1, which range from 140 to 110 miles per hour. Gulf's report, in Appendices 5 and 6, describe specific storm hardening actions for both overhead and underground facilities. Staff believes Gulf could not have established recommended storm hardening actions without assessing possible benefits derived from such actions. Thus, Gulf has demonstrated it has the skills, expertise, and data to make estimates of potential reduction in storm restoration costs and outages for various storm hardening options such as increased pole strength, additional guys, and short spans. Staff believes the absence of benefit data is not reasonable because Gulf has the opportunity and the resources to make estimates of reduced storm restoration costs and outages.

#### Mitigation of Flood and Storm Surge Damages to Underground Facilities

Gulf's plan, at Appendix 6, page 1, states, "Gulf Power's Underground Distribution Facilities shall, where practical, be storm hardened to the extent practical using the methods described in this section." Sections 6 and 9 of Gulf's plan do not identify any specific effort to mitigate costs and outages on underground systems due to flooding and storm surge. While it appears that Gulf is not evaluating storm surge problems, some level of review must have occurred because Appendix 6 contains specific methods to mitigate effects of storm surge for vaults used in underground systems. Consequently, staff believes the scope and costs of Gulf's efforts to mitigate flood and storm surge damages to underground system is unclear and requires additional support.

#### Identification of Storm Hardening Activities, Resultant Costs and Benefits

Staff believes few storm hardening activities were identified in Gulf's plan because Gulf asserts it cannot estimate the reduction in storm restoration costs and outages that will result from the proposed storm hardening initiatives. Gulf asserts it needs data to make such estimates. However, Gulf's report does not propose a program that substantively evaluates new projects, relocations, and daily activities for storm hardening options. Consequently, Gulf's plan may not provide Gulf with the missing data because Gulf is not looking for the missing data. Staff is concerned that Gulf has implemented a circular reasoning process that may serve to indefinitely postpone any substantive identification of new storm hardening activities, benefits, or costs that may accrue to Gulf's current and future customers.

#### Cost-Effective Reduction of Storm Damage Costs and Outages

Staff believes the cost-effectiveness of Gulf's proposed plan is not fully supported because: (1) Gulf has not estimated reductions in storm restoration costs and outages and (2) Gulf has not implemented a process to assess new projects, relocations, or major rebuild projects for storm hardening options.

In general, certain aspects of verifying customer benefits depend on future storm experiences. Nevertheless, it is also possible to test elements of Gulf's planned activities through simulated extreme weather events and thereby avoiding complete reliance on a "trial-by-experience" approach. Gulf's plan does not adequately discuss a feed-back mechanism that

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ensures that the overarching goals of lower storm restoration costs and fewer storm outages are achieved economically.

#### Consideration of Input from Interested Parties

Gulf solicited and considered input from collocated utilities and third-party attachers. Comment by these affected parties suggests to staff that the 90-day period set by rule may have limited the level of dialog between Gulf and affected parties. Gulf represents that dialog with these parties is ongoing. However, the nature of that dialog is primarily on aspects of the pole owner/attacher processes and is not expected to materially impact the scope of Gulf's storm hardening activities.

#### Operational Expense Differential Between Overhead and Underground Distribution Systems required for Calculation of Contribution-In-Aid-of-Construction (CIAC) pursuant to Rules 25-6.078 and 25-6.115, Florida Administrative Code

Gulf's filed plan contains no support for assessing the operational expense differential between overhead and underground distribution systems. GPC asserts it has proposed a cost-effective plan. Thus, staff believes GPC has the information necessary to determine the operation expense differential between GPC's overhead and underground systems.

#### **Conclusion**

Staff believes additional support for each Storm Hardening Plan is necessary to verify whether the scope of each Storm Hardening Plan satisfies the intent of Rule 25-6.0342, Florida Administrative Rule. Staff recommends that Docket Nos. 070297-EI, 070298-EI, 070299-EI, and 070301-EI should be scheduled directly for a formal administrative hearing, thereby allowing staff to conduct formal discovery and to ensure adequate participation by Intervenors and third-party attachers. As part of the hearing process, staff should conduct a series of informal Workshops to allow parties and staff to identify disputed issues and potential areas for stipulation.

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**Issue 2:** Should the Commission grant FPUC's petition for a temporary waiver from Rule 25-6.0342(2), Florida Administrative Code?

**Recommendation:** Yes. FPUC's petition for a temporary waiver from Rule 25-6.0342(2), Florida Administrative Code, seeking an additional 60 days to file its Storm Hardening Plan should be granted. FPUC should file its 2007 Storm Hardening Plan by July 6, 2007. If FPUC fails to file its 2007 Storm Hardening Plan to the Commission on or before July 6, 2007, staff recommends that a show cause proceeding should be initiated. (Holley, Young, Bremen, Wilson)

**Staff Analysis:** Rule 25-6.0342(2), Florida Administrative Code, required each IOU to file for Commission approval a detailed Storm Hardening Plan no later than May 7, 2007. On May 4, 2007, FPUC filed its Petition for Variance from Rule 25-6.0342(2), Florida Administrative Code (Petition), pursuant to Section 120.542, Florida Statutes. Pursuant to Section 120.542, Florida Statutes, notice of FPUC's Petition was filed with the Florida Administrative Weekly (FAW) on May 15, 2007, and subsequently published on May 25, 2007. Comments on FPUC's Petition are due by June 8, 2007. No written comments in response to the FAW notice have been received at this time. However, on May 30, 2007, BellSouth Telecommunications, Inc. d/b/a AT&T Florida (AT&T Florida) filed comments regarding FPUC's Petition in response to staff's Request for Preliminary Comments from Interested Persons and Third-Party Attachers. In its comments, AT&T Florida states that it has no objection to FPUC's Petition for Waiver, but requests that FPUC be required to provide a copy of its proposed Storm Hardening Plan to AT&T Florida at least 30 days before the filing deadline.

FPUC seeks a waiver of Rule 25-6.0342(2), Florida Administrative Code, which is the portion of the rule that requires each IOU to file with the Commission, for its approval, a detailed Storm Hardening Plan by May 7, 2007. Specifically, FPUC seeks an additional 60 days to file its 2007 Storm Hardening Plan. In its Petition, FPUC cites to the plans previously filed with the Commission pursuant to Order No. PSC-06-0351-PAA, issued in Docket No. 060198-EI, and the subsequent Petitions filed by FPUC seeking recovery of the costs to implement the storm preparedness initiatives. In addition, on April 27, 2007, FPUC submitted a Test Year Notification letter advising the Commission that it intends to file with the Commission a Petition to increase its rates and charges by September 17, 2007.

Section 120.542, Florida Statutes, authorizes the Commission to grant variances or waivers to the requirements of its rules where the person subject to the rule has demonstrated that the underlying purpose of the statute has been or will be achieved by other means, and strict application of the rule would cause the person substantial hardship or would violate principles of fairness. "Substantial hardship" as defined in this section means a demonstrated economic, technological, legal, or other hardship to the person requesting the variance or waiver.

Rule 25-6.0342, Florida Administrative Code, implements Sections 366.04(2)(c), (5) and (6), and 366.05(1), Florida Statutes. Thus, the rule implements the parts of the Grid Bill<sup>3</sup> that

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<sup>3</sup> The Grid Bill is made up of Sections 366.04(2)(c), (d), (e), (f), 366.04(5), 366.05(7) & (8), and 366.055(1), (2), & (3), Florida Statutes. One objective of the Grid Bill was to give the Commission expanded jurisdiction over the planning, development, and coordination of electric utilities throughout the State of Florida.

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give the Commission jurisdiction over electric utilities to require electric power conservation and reliability within a coordinated grid, for operational as well as emergency purposes; the planning, development, and maintenance of a coordinated electric power grid to assure an adequate and reliable source of energy for operational and emergency purposes in Florida; and to prescribe and enforce safety standards for transmission and distribution facilities. The rule also implements Section 366.05(1), Florida Statutes, which provides:

In the exercise of such jurisdiction, the commission shall have power to prescribe .... standards of quality and measurements, including the ability to adopt construction standards that exceed the National Electrical Safety Code, for purposes of ensuring the reliable provision of service, and service rules and regulations to be observed by each public utility; to require repairs, improvements, additions, replacements, and extensions to the plant and equipment of any public utility when reasonably necessary to promote the convenience and welfare of the public and secure adequate service or facilities for those reasonably entitled thereto.

Rule meets the underlying purpose of these statutes, because the objection of the rule is to enhance reliability and reduce restoration costs and outage times. The underlying purpose of the rule will still be met if FPUC's waiver is granted because FPUC does intend to file its plan, the goal of which should be to enhance reliability and reduce restorations costs and outage times for its two systems.

Through its Petition, FPUC is seeking an additional 60 days to file its Storm Hardening Plan and has not sought excusal from filing its Plan altogether. If the Commission grants FPUC's waiver, FPUC will be required to file its Plan for Commission approval on or before July 6, 2007. Staff believes that even with the additional 60 days, the Commission and intervenors will have adequate opportunity to review and evaluate FPUC's Storm Hardening Plan. In addition, because FPUC has asserted that substantial cost increases will be associated with implementing its Plans in excess of its current revenues, the Commission will be able to further evaluate FPUC's Storm Hardening Plan as a substantive issue in FPUC's upcoming rate case. Accordingly, staff believes that the general purpose of the underlying statutory provisions of the rule will be satisfied if the Commission grants FPUC's request for an additional 60 days to file its Storm Hardening Plans, because the Commission will still have an opportunity to conduct an extensive review of the plan.

Staff also believes that under the circumstances, application of the May 7, 2007, due date to FPUC would create a substantial hardship for FPUC. FPUC is a substantially smaller company than the other electric IOUs with limited resources and personnel to keep up with FPUC's several pending dockets before the Commission. In consideration of the limitations that it faces with respect to resources and personnel, it would have created a substantial hardship FPUC to complete its Storm Hardening Plan by May 7, 2006. Thus, staff believes that the 60 day extension of time to file its Storm Hardening Plan is warranted.

Accordingly, FPUC's petition for a temporary waiver from Rule 25-6.0342(2), Florida Administrative Code, seeking an additional 60 days to file its Storm Hardening Plan should be

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granted. FPUC should file its 2007 Storm Hardening Plan on or before July 6, 2007. However, if FPUC fails to file its 2007 Storm Hardening Plan on or before July 6, 2007, staff recommends that a show cause proceeding be initiated.

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**Issue 3**: Should these dockets be closed?

**Recommendation**: Docket Nos. 070297-EI, 070298-EI, 070299-EI, and 070301-EI should remain open pending the Commission's review of each 2007 Storm Hardening Plan. If no timely protest is received to the proposed agency action on FPUC's request for waiver in Docket No. 070300-EI, the Order granting FPUC's waiver will become final upon the issuance of Consummating Order. Docket No. 070300-EI should remain open pending the Commission's review of FPUC's 2007 Storm Hardening Plan. (Holley, Young)

**Staff Analysis**: Docket Nos. 070297-EI, 070298-EI, 070299-EI, and 070301-EI should remain open pending the Commission's review of each 2007 Storm Hardening Plan. If no timely protest is received to the proposed agency action on FPUC's request for waiver in Docket No. 070300-EI, the Order granting FPUC's waiver will become final upon the issuance of Consummating Order. Docket No. 070300-EI should remain open pending the Commission's review of FPUC's 2007 Storm Hardening Plan.

### **Inspections and Replacements of Wooden Poles (Docket No. 060078-EI and 060077-TL)**

To assure the storm-readiness of electric utility distribution poles in an era of increased storm activity, the Commission required an eight-year mandatory wooden pole inspection program for certain electric and telecommunications companies.<sup>4</sup> Each company is required to file, by March 1, annual inspection reports that contain the following informational sections:

- A review of the methods the company used to determine National Electrical Safety Code compliance for strength and structural integrity of the wood poles included in the previous year's annual inspections, taking into account pole loadings where required.
- An explanation of the inspected poles, selection criteria, including, among other things, geographic location and the rationale for including each such selection criterion.
- Summary data and results of the company's previous year's transmission and distribution wood pole inspections, addressing the strength, structural integrity, and loading requirements of the National Electrical Safety Code.
- The cause(s) of each pole failure for poles failing inspection, to the extent that such cause(s) can be discerned in the inspection. Also, the specific actions the company has taken or will take to correct each pole failure.

### **Ten Additional Storm Preparedness Initiatives (Docket No. 060198-EI)**

On April 25, 2006, the Commission issued Order No. PSC-06-0351-PAA-EI, in Docket No. 060198-EI, In re: Requirement for investor-owned electric utilities to file ongoing storm preparedness plans and implementation costs estimates, requiring each IOU to file plans and implementation costs for the following ten ongoing storm preparedness initiatives on or before June 1, 2006:

- A Three-Year Vegetation Management Cycle for Distribution Circuits.
- An Audit of Joint-Use Attachment Agreements.
- A Six-Year Transmission Structure Inspection Program.
- Hardening of Existing Transmission Structures.
- A Transmission and Distribution Geographic Information System.
- Post-Storm Data Collection and Forensic Analysis.
- Collection of Detailed Outage Data Differentiating Between the Reliability Performance of Overhead and Underground Systems.

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<sup>4</sup> Order No. PSC-06-0144-PAA-EI, issued February 27, 2006, in Docket No. 060078-EI – In re: Proposal to require investor-owned electric utilities to implement ten-year wood pole inspection program. Order No. PSC-06-0168-PAA-TL, issued March 1, 2006, in Docket No. 060077-TL – In re: Proposal to require local exchange telecommunications companies to implement ten-year wood pole inspection program.

- Increased Utility Coordination with Local Governments.
- Collaborative Research on Effects of Hurricane Winds and Storm Surge.
- A Natural Disaster Preparedness and Recovery Program.

The list of ten initiatives was not intended to encompass all reasonable ongoing storm preparedness initiatives. Rather, the Commission viewed these initiatives as the starting point of an ongoing process. Utilities and interested persons were encouraged to identify additional initiatives and to suggest alternative plans so long as the same objectives were achieved in a cost-effective manner.

By Order Nos. PSC-06-0781-PAA-EI and PSC-06-0947-PAA-EI, issued September 19, 2006, and November 13, 2006, the Commission accepted each IOUs' plans to implement the initiatives and also required the IOUs to provide periodic updates and status reports of their ongoing storm hardening initiatives in their comprehensive Annual Distribution Service Reliability Reports, which are filed by March 1 of each year, pursuant to Rule 25-6.0455, Florida Administrative Code.

**Annual Distribution Service Reliability Reports by IOUs pursuant to Rule 25-6.0455, Florida Administrative Code (Docket No. 060243-EI)**

Pursuant to Rule 2-6.0455, Florida Administrative Code, all IOUs are required to file Distribution Service Reliability Reports by March 1 of each year. On July 31, 2006, the Commission adopted rules that changed the existing reporting requirements for the IOUs to include reliability data for extreme weather events such as hurricanes.<sup>5</sup> Prior reporting requirements allowed for the exclusion of reliability data that is typically related to power outage events that are viewed as outside the utility's ability to prevent. Thus, absent the rule change, the IOUs' reports provided no insight into storm-related impacts on reliable electric service in Florida. The rule changes specifically require IOUs to retain records and data supporting their annual reports.

The Commission determined that the most effective method to monitor each utility's ongoing storm hardening initiatives is in conjunction with the Commission's annual review of distribution reliability performance. Thus, the Commission's expectation was that the March 1 reports would be comprehensive self-critical reports on service reliability. The IOUs' March 1, 2007, reports are currently under review. Each utility's comprehensive reliability report filed March 1, 2007, include the following three topics:

- The utility's system distribution reliability performance for 2006 pursuant to Rule 25-6.0455, Florida Administrative Code;
- The utility's pole inspection report pursuant to Order No. PSC-06-0144-PAA-EI, issued February 27, 2006, in Docket No. 060078-EI, In re: Proposal to require

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<sup>5</sup> Order No. PSC-06-0645-FOF-EI, issued July 31, 2006, in Docket No. 060243-EI – In re: Proposed revisions to Rule 25-6.044, Florida Administrative Code, Continuity of Service, and Rule 25-6.0455, Florida Administrative Code, Annual Distribution Service Reliability Report.



investor-owned electric utilities to implement ten-year wood pole inspection program and Order No. PSC-07-0078-PAA-EU, issued January 29, 2007, in Docket No. 060531-EU, In re: Review of all electric utility wooden pole inspection programs; and

- The utility's report on ten ongoing storm hardening initiatives pursuant to Order Nos. PSC-06-781-PAA-EI, and PSC-06-0947-PAA-EI in Docket No. 060198-EI, In re: Requirement for investor-owned electric utilities to file ongoing storm preparedness plans and implementation cost estimates.

While comprehensive regarding 2006 and prior years, the March 1 reports provide only estimated activities for 2007, and are not intended to provide detailed analysis pertaining to 2008 and 2009 storm hardening activities.

**25-6.0342 Electric Infrastructure Storm Hardening.**

(1) Application and Scope. This rule is intended to ensure the provision of safe, adequate, and reliable electric transmission and distribution service for operational as well as emergency purposes; require the cost-effective strengthening of critical electric infrastructure to increase the ability of transmission and distribution facilities to withstand extreme weather conditions; and reduce restoration costs and outage times to end-use customers associated with extreme weather conditions. This rule applies to all investor-owned electric utilities.

(2) Storm Hardening Plans. Each utility shall, no later than 90 days after the effective date of this rule, file with the Commission for its approval a detailed storm hardening plan. Each utility's plan shall be updated every 3 years, unless the Commission, on its own motion or on petition by a substantially affected person or utility, initiates a proceeding to review and, if appropriate, modify the plans. In a proceeding to approve a utility's plan, the Commission shall consider whether the utility's plan meets the desired objectives of enhancing reliability and reducing restoration costs and outage times in a prudent, practical, and cost-effective manner to the affected parties.

(3) Contents of Plan: Each utility storm hardening plan shall contain a detailed description of the construction standards, policies, practices, and procedures employed to enhance the reliability of overhead and underground electrical transmission and distribution facilities in conformance with the provisions of this rule. Each filing shall, at a minimum, address the extent to which the utility's storm hardening plan:

(a) Complies, at a minimum, with the National Electric Safety Code (ANSI C-2) [NESC] that is applicable pursuant to subsection 25-6.0345(2), F.A.C.

(b) Adopts the extreme wind loading standards specified by Figure 250-2(d) of the 2007 edition of the NESC for the following distribution facilities:

1. New construction;
2. Major planned work, including expansion, rebuild, or relocation of existing facilities, assigned on or after the effective date of this rule; and
3. Critical infrastructure facilities and along major thoroughfares taking into account political and geographical boundaries and other applicable operational considerations.

(c) Is designed to mitigate damage to underground and supporting overhead transmission and distribution facilities due to flooding and storm surges.

(d) Provides for the placement of new and replacement distribution facilities so as to facilitate safe and efficient access for installation and maintenance pursuant to Rule 25- 6.0341, F.A.C.

(4) Deployment Strategy: Each utility storm hardening plan shall explain the systematic approach the utility will follow to achieve the desired objectives of enhancing reliability and reducing restoration costs and outage times associated with extreme weather events. The utility's storm hardening plan shall provide a detailed description of its deployment strategy including, but not limited to the following:

(a) A description of the facilities affected; including technical design specifications, construction standards, and construction methodologies employed.

(b) The communities and areas within the utility's service area where the electric infrastructure improvements, including facilities identified by the utility as critical infrastructure and along major thoroughfares pursuant to subparagraph (3)(b)3. are to be made.

(c) The extent to which the electric infrastructure improvements involve joint use facilities on which third-party attachments exist.

(d) An estimate of the costs and benefits to the utility of making the electric infrastructure improvements, including the effect on reducing storm restoration costs and customer outages.

(e) An estimate of the costs and benefits, obtained pursuant to subsection (6) below, to third-party attachers affected by the electric infrastructure improvements, including the effect on reducing storm restoration costs and customer outages realized by the third-party attachers.

(5) Attachment Standards and Procedures: As part of its storm hardening plan, each utility shall maintain written safety, reliability, pole loading capacity, and engineering standards and procedures for attachments by others to the utility's electric transmission and distribution poles (Attachment Standards and Procedures). The Attachment Standards and Procedures shall meet or exceed the edition of the National Electrical Safety Code (ANSI C-2) that is applicable pursuant to Rule 25-6.034, F.A.C. so as to assure, as far as is reasonably practicable, that third-party facilities attached to electric transmission and distribution poles do not impair electric safety, adequacy, or pole reliability; do not exceed pole loading capacity; and are constructed, installed, maintained, and operated in accordance with generally accepted engineering practices for the utility's service territory.

(6) Input from Third-Party Attachers: In establishing its storm hardening plan and Attachment Standards and Procedures, or when updating or modifying such plan or Attachment Standards and Procedures, each utility shall seek input from and attempt in good faith to accommodate concerns raised by other entities with existing agreements to share the use of its electric facilities. Any third-party attacher that wishes to provide input under this subsection shall provide the utility contact information for the person designated to receive communications from the utility.

(7) Dispute Resolution: Any dispute or challenge to a utility's storm hardening plan, construction standards, deployment strategy, Attachment Standards and Procedures, or any projects implementing any of the above by a customer, applicant for service, or attaching entity shall be resolved by the Commission.

(8) Nothing in this rule is intended to conflict with Title 47, United States Code, Section 224, relating to Federal Communications Commission jurisdiction over pole attachments.

*Specific Authority 350.127(2), 366.05(1) FS. Law Implemented 366.04(2)(c), (5), (6), 366.05(1) FS. History—New 2-1-07.*