

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for approval of 2016-2018 storm  
hardening plan, pursuant to Rule 25-6.0342,  
F.A.C., by Florida Public Utilities Company.

DOCKET NO. 160106-EI  
ORDER NO. PSC-16-0570-PAA-EI  
ISSUED: December 19, 2016

The following Commissioners participated in the disposition of this matter:

JULIE I. BROWN, Chairman  
LISA POLAK EDGAR  
ART GRAHAM  
RONALD A. BRISÉ  
JIMMY PATRONIS

NOTICE OF PROPOSED AGENCY ACTION  
ORDER APPROVING FLORIDA PUBLIC UTILITIES COMPANY'S  
UPDATED STORM HARDENING PLAN FOR 2016-2018

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 Rules 25-22.029 and 28-106.201, 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, the Florida Public Service Commission (Commission) staff 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, this Commission issued Order No. PSC-06-0144-PAA-EI, in Docket No. 060078-EI, requiring that the IOUs 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

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

maintain system components can reduce the impact of hurricanes and tropical 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...must be replaced is through periodic inspections. (p. 2)

On April 25, 2006, this Commission issued Order No. PSC-06-0351-PAA-EI, in Docket No. 060198-EI, requiring all IOUs to file plans and estimated implementation costs for ten 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
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, this Commission viewed these initiatives as a 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), this Commission addressed the adequacy of the IOU's plans for implementing the Ten Initiatives.

This Commission also pursued rulemaking to address the adoption of distribution construction standards more stringent than the minimum safety requirements of the National

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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.

<sup>3</sup>Order No. PSC-06-09351-PAA-EI, p.2, issued April 25, 2006, in Docket No. 060198-EI, In re: Requirement for investor-owned electric utilities to file ongoing storm preparedness plans and implementation costs estimates.

Electric Safety Code (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 this Commission which includes a description of construction standards, policies, practices, and procedures to enhance the reliability of overhead and underground electrical transmission and distribution facilities. The Rule calls for, at a minimum, each IOU's plan to 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
  - iii. Critical infrastructure facilities and along major thoroughfares
- c. Mitigation of damage due to flooding and storm surges
- d. Placement of facilities to facilitate safe and efficient access for installation and maintenance
- e. A deployment strategy that includes:
  - 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
  - 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

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<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.

On May 3, 2013, the five IOUs filed 2013-2015 storm hardening plan updates. This Commission approved the storm hardening plans for Duke Energy Florida, LLC (DEF), Florida Public Utilities Company (FPUC), Florida Power and Light Company (FPL), Tampa Electric Company (TECO), and Gulf Power Company (Gulf), at the November 14, 2013 Commission Conference.<sup>6</sup> On May 2 and 3, 2016, four IOUs filed 2016-2018 storm hardening plan updates as required. Docket Nos. 160105-EI (TECO), 160106-EI (FPUC), 160107-EI (DEF) and 160108-EI (Gulf) were opened. FPL filed its 2016-2018 storm hardening plan updates on March 15, 2016, and Docket No. 160061-EI was opened. That docket was consolidated with Docket No. 160021-EI, Petition for rate increase by Florida Power & Light Company. Commission staff did not conduct a workshop for these updated storm hardening plans as data request responses were sufficient in understanding the updated plans.

This order addresses FPUC's plan updates as required by Rule 25-6.0342, F.A.C. Specifically, this order addresses:

- I. Wooden Pole Inspection Program
- II. Ten Initiatives
- III. National Electric Safety Code (NESC) Compliance
- IV. Extreme Wind Loading (EWL) Standards
- V. Mitigation of Flooding and Storm Surge Damage
- VI. Facility Placement
- VII. Deployment Strategies
- VIII. Attachment Standards and Procedures for Third Party Attachments

Attachment A describes the storm hardening requirements of the wooden pole inspection program and the Ten Initiatives for each IOU. Attachment B contains a comparison of FPUC's provisions of the 2013-2015 approved and updated 2016-2018 wooden pole inspection programs and Ten Initiatives, and the cost of implementing the approved and updated programs and initiatives.

This Commission has jurisdiction over this matter pursuant to Sections 366.04 and 366.05, Florida Statutes (F.S.).

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<sup>6</sup>Order No. PSC-13-0637-PAA-EI, issued December 3, 2013, in Docket No: 130129-EI, In re: Petition for approval of 2013-2015 storm hardening plan, pursuant to Rule 25-6.0342, F.A.C., by Duke Energy Florida, Inc.; Order No. PSC-13-0638-PAA-EI, issued December 3, 2013, in Docket No: 130131-EI, In re: Petition for approval of 2013-2015 storm hardening plan, pursuant to Rule 25-6.0342, F.A.C., by Florida Public Utilities Company; Order No. PSC-13-0639-PAA-EI, issued December 3, 2013, in Docket No: 130132-EI, In re: Petition for approval of 2013-2015 storm hardening plan, pursuant to Rule 25-6.0342, F.A.C., by Florida Power and Light Company; Order No. PSC-13-0640-PAA-EI, issued December 3, 2013, in Docket No: 130138-EI, In re: Petition for approval of 2013-2015 storm hardening plan, pursuant to Rule 25-6.0342, F.A.C., by Tampa Electric Company; Order No. PSC-13-0641-PAA-EI, issued December 3, 2013, in Docket No: 130139-EI, In re: Petition for approval of 2013-2015 storm hardening plan, pursuant to Rule 25-6.0342, F.A.C., by Gulf Power Company.

### Decision

On Attachment B, we provided a summary of FPUC's current wooden pole inspection program and Ten Initiatives and the approved changes. In addition, where available, we have shown the costs associated with the wooden pole inspections programs and Ten Initiatives for 2013-2015 and 2016-2018. Components of FPUC's updated plan are summarized below.

#### **Wooden Pole Inspection Program**

FPUC is continuing its eight-year wooden pole inspection.<sup>7</sup> The program identifies poles that require repair, reinforcement or replacement. An outside contractor, Osmoste Utilities Services, Inc., performs all wooden pole inspections, including strength and loading tests. Currently, FPUC is in its first year of its second eight-year cycle. FPUC will continue to file the results of these inspections in its Annual Electric Utility Distribution Reliability Report. The estimated cost for 2016-2018 related to the eight-year wooden pole inspection program is \$405,000 as compared to \$268,000 spent for 2013-2015.

#### **Ten Initiatives**

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

FPUC proposed no changes to its previously approved trim cycle. Currently, its feeder and lateral circuits are trimmed, on average, every three years and six years, respectively.<sup>8</sup> FPUC reported that it has 139.63 miles of feeders and 570.87 miles of laterals. FPUC will continue to communicate with customers and local governments to address vegetation management. The estimated cost for 2016-2018 for Initiative One is \$2,940,000 as compared to \$2,718,143 spent for 2013-2015.

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

There are no proposed changes to this initiative. FPUC has joint use agreements with multiple third party attachers and although the agreements allow a joint use audit, audits have not been conducted since 2000. FPUC initiated an audit in 2016 to identify the total number of attachments and any violations that may exist. FPUC does not perform strength and loading assessments during the joint use audits as these tests are performed during the wooden pole inspections. The audits include:

- Pole Locations
- Owner of the pole

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<sup>7</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-07-0078-PAA-EU, issued January 29, 2007, in Docket No. 060531-EU, In re: Review of all electric utility wooden pole inspection programs.

<sup>8</sup>Docket No. 100264-EI, In re: Review of 2010 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342, F.A.C., submitted by Florida Public Utilities Company.

- City and county location
- Pole type, height, class and treatment
- Pole date manufactured, inspected, and retreated
- Joint use attacher name and type (telecommunication, cable)
- Violations
- Miscellaneous comments

Data collected from the audit will be analyzed to determine the number of poles found to be overloaded, number of unauthorized attachers and customer outages related to these situations. The estimated cost for 2016-2018 is \$0, which is what was spent in 2013-2015.

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

FPUC proposed no changes for this initiative. FPUC's transmission structure inspection program includes a climbing patrol of its 138 kV and 69 kV transmission lines on a six-year cycle and transmission substations on an annual cycle. The program includes inspecting transmission towers and transmission supporting equipment such as insulators, guying, grounding, conductor splicing, cross-braces, cross-arms, and bolts. The program also includes inspecting all structures, buss work, insulators, grounding, bracing and bolts at the transmission substations. The estimated cost for this initiative for 2016-2018 is \$87,000. FPUC did not track the operation and maintenance cost for this initiative for 2013-2015.

*Initiative Four – Hardening of Existing Transmission Structures*

There is no change in the plan for this initiative. FPUC's 138 kV transmission system is constructed using concrete and steel structures. The 69 kV transmission system consists of 221 poles, 98 of them are concrete. FPUC will continue to replace the wooden poles when it is necessary due to construction requirements or concerns with the integrity of the pole. FPUC reported that by the end of 2016, there will be 49 percent of its transmission structures left to be hardened. The costs for 2016-2018 are estimated to be \$750,000 as compared to \$2,392,000 spent in 2013-2015. FPUC explained that its current plan is to replace four poles per year, however, this could vary depending on the transmission inspection findings and new projects.

*Initiative Five – Transmission and Distribution Geographic Information System (GIS)*

There is no proposed changed for this initiative. FPUC implemented its GIS in 2008. The GIS identifies the distribution and transmission facilities on a land base map. This allows FPUC the ability to record data on all physical assets. The system communicates with FPUC's Customer Information System and functions as an Outage Management System (OMS) that allows collection of data used in determining reliability. FPUC's GIS also collects information regarding joint use attachments, which provide additional information in conducting the joint use audits. The costs for 2016-2018 are estimated to be \$62,100 as compared to \$60,000 spent in 2013-2015.

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

There is no change to this initiative. FPUC has a forensics team to coordinate communications, schedule data collection, and to report the findings. FPUC utilizes a contractor to collect, analyze and report on field data collected, which is entered into FPUC's OMS. The contractor will perform a forensic investigation at damage locations. The criteria for damage locations include, but are not limited to, poles, wires, crossarms, insulators, transformers, reclosers, capacitor banks, cutouts, and any other equipment that is damaged or has caused a customer outage. Data will also be collected on damaged facilities as defined as broken poles, leaning poles, broken or downed wires, damaged line equipment, and any other incident that has caused a customer outage.

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

FPUC proposed no changes for this initiative. FPUC will continue to collect outage data for overhead and underground systems in order to evaluate the reliability associated with the two systems. The forensic team report form allows for both overhead and underground damage to be entered. The data will be entered separately for each incident.

*Initiative Eight – Increased Coordination with Local Governments*

There is no change in the plan for this initiative. FPUC reported that it actively participates with local governments in planning for emergency situations. This includes establishing the necessary communications for these situations. FPUC will have personnel located at the county Emergency Operation Centers (EOCs) on a 24-hour basis during emergencies. FPUC reported that this allows for improved updating of outage information as storm restoration occurs. FPUC will continue discussing undergrounding and tree trimming issues with local governments. FPUC reported that involvement and discussion on these issues allowed for additional communication and education for both FPUC and the local governments.

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

There is no change to this initiative. FPUC will continue to participate in the collaborative research effort with the other Florida's IOUs, municipals and cooperatives. The collaborative research is facilitated by the Public Utility Research Center (PURC) at the University of Florida and focuses on 1) undergrounding of electric utility infrastructure, 2) hurricane wind effects, and 3) public outreach. FPUC will continue to support PURC's effort but does not intend to conduct other type of research at this time.

*Initiative Ten – Natural Disaster Preparedness and Recovery Program*

FPUC will continue to refine this initiative. FPUC's Disaster Preparedness and Recovery Plan provides guidelines under which the Utility will operate in emergency conditions. In order to ensure orderly and efficient service restoration, the guidelines address the following objectives:

- Safety of employees, contractors, and the general public
- Early damage assessment
- Request additional manpower
- Provide for orderly restoration activities
- Provide all logistical needs for employees and contractors
- Provide ongoing preparation of FPUC's employees, buildings, and equipment
- Provide support and additional resources for FPUC's employees and families

FPUC will utilize the plan to prepare for storms annually. The plan will also ensure that all employees are aware of their responsibilities during the storms. FPUC's plan is updated annually and the updates for 2015 and 2016 were: updated logos, removed a table, clarified roles and responsibilities of certain employees, updated the organization chart to reflect employee changes, updated emergency numbers, and updated logistic vendor information.

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

FPUC's updated plan addresses how the Utility complies with the NESC pursuant to Rule 25-6.0345, F.A.C. FPUC's distribution, transmission, and substations facilities have been installed in accordance with the NESC. FPUC increased the normal primary distribution pole size from Class 3 or 4 to Class 1 and FPUC is using EWL software to determine if these larger poles are sufficient. When necessary, FPUC will replace a wooden transmission pole with a concrete pole that meets the NESC, by withstanding higher wind loadings and meeting the NESC for conductor sagging, pole grounding, phase-to-phase spacing and phase-to-ground clearances. FPUC's substations meet the NESC for EWL criteria, buss spacing, phase-to-ground clearances and grounding.

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

FPUC incorporated EWL standards as specified in Rule 250C and in Figure 25-2(d) of the NESC. As discussed above, FPUC's distribution, transmission, and substations meet or exceed the NESC. For example, the current NESC code requires structures in Fernandina Beach to be designed to sustain wind loading of 120 mph. FPUC requires all new transmission pole structures in Fernandina Beach to withstand 130 mph winds. FPUC has also increased the primary distribution pole size from Class 3 or 4 to Class 1. FPUC reported that the upgrades to the Class 1 poles comply with EWL requirements. All poles in FPUC's system are constructed using Grade B construction. The NESC requires distribution poles to be designed at least to Grade C construction.

#### *New Construction/Major Planned Work*

FPUC reported that all future installations are designed to meet the NESC and EWL. As discussed above, FPUC designs its system to Grade B construction. In addition, FPUC increased the pole sizes. Therefore, FPUC's new construction and major planned projects are designed to meet EWL and the NESC.

### *Critical Infrastructure*

Critical infrastructure (CIF) are circuits feeding loads to critical community facilities such as, hospitals, water plants, and wastewater plants. FPUC has hardened several CIFs to EWL standards and will continue to evaluate the remaining CIF for opportunities to harden. FPUC has four feeder projects in process for 2016. FPUC has two feeder projects planned for 2017 and two feeder projects for 2018.

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

FPUC's transmission facilities are located in its Northeast Florida Division. The transmission lines are constructed near and across coastal waterways. The facilities were originally designed to meet the NESC. Foundations and castings were used to stabilize the structures due to the soil conditions. Overhead distribution lines are located in both divisions and are subject to storm surges and flooding. If needed, additional supporting mechanisms, such as storm guys or pole bracing, will be installed. Reclosers, capacitors, and regulators that require electronic controls will be mounted above the maximum surge or flood levels. FPUC's underground distribution lines that are subject to storm surges and flooding are located in the Northeast Florida Division. FPUC installs pads that are placed approximately two feet into the ground to provide additional stability to the installation of underground lines. Underground distribution lines are placed in conduits. For future installations, FPUC will evaluate the location for storm surges or flooding. If the possibility exists for storm surges, the underground lines will be encased in concrete ducts.

### **Facility Placement**

FPUC's facilities are located in areas that are easily accessible. The facilities will be placed along public right-of-ways or located on private easements that are readily accessible from public streets. FPUC reported that these requirements are necessary to efficiently and safely perform installation and maintenance on the facilities. FPUC noted that placing facilities along rear lot lines will only be constructed as a "last resort."

### **Deployment Strategies**

FPUC's plan contains its deployment of storm hardening strategy that will have an impact on future storm restoration activities.

#### *Facilities Affected, Including Specifications and Standards*

The significant areas of implementation from the deployment of FPUC storm hardening strategy are:

- Wooden poles will be inspected at least every eight years
- Vegetation management activities will ensure that feeders are trimmed every three years and laterals are trimmed every six years

- Joint use audits will be conducted every five years to identify pole loading issues
- Detailed climbing inspections on all transmission facilities will be conducted every six years
- FPUC will continue to replace wood transmission structures with concrete
- FPUC will continue to rebuild its CIF to EWL
- FPUC will use techniques to mitigate damage from storm surges and floods
- FPUC will continue to place facilities on public right-of-ways

#### *Areas of Infrastructure Improvements*

Most of the items listed above will affect all areas of FPUC service territory. The transmission inspection and replacement of transmission structures will only affect the Northeast Florida Division. The Northwest Florida Division does not have any transmission facilities. The rebuilding of CIF to EWL will equally benefit both divisions.

#### *Joint-Use Facilities*

FPUC plans to begin the upgrades on joint use facilities in 2016 through 2018 as a result of its joint use audit. A significant amount of pole upgrades will have one or more joint use attachments and EWL will be applied to all poles upgraded. Current contract language for joint use attachers will be used as a guide for the rebuilding process.

#### *Utility Cost/Benefit Estimates*

FPUC's updated plan includes estimates of costs to be incurred in connection with its updated plan for 2016 through 2018. This includes pole replacements, inspections of distribution and transmission facilities, vegetation management, and other projects. For 2013 through 2015, FPUC spent a total of \$5,976,771 on its storm hardening plan. FPUC estimated it will spend approximately \$4,846,500 for 2016 through 2018. FPUC is indicating a decrease in hardening of transmission structures in next the three years. FPUC has not quantified the benefits of storm hardening due to a lack of forensic data. As more projects are completed, the incremental benefits will likely be reduced. Therefore, FPUC shall consider the rate impact before taking proactive steps to improve its system to withstand severe weather events. Attachment B shows a comparison of cost associated with implementation of FPUC's current and updated wooden pole inspection program and Ten Initiatives.

#### *Attachers Cost/Benefit Estimates*

FPUC's updated plan provides that it anticipates up to 190 joint use poles will be identified for replacement annually. During its wooden pole inspections, FPUC will inspect its owned poles, while all third party poles will be inspected by the owner of the pole. FPUC ensures that the poles will be evaluated for structural soundness and strength and load testing will be performed. Documentation will be developed on the poles that do not meet the requirements. FPUC has elected to replace all poles failing inspection and as this occurs, with

joint use attachers' input, procedures for the replacement and transfer of necessary attachments will be developed. In accordance with FPUC's joint use agreements, all joint use attachers will be included in the joint use audit to determine attachment amounts and to identify possible loading issues that need to be addressed.

### **Attachment Standards and Procedures**

FPUC's updated plan includes the current Joint Use Attachment Specifications addressing safety, reliability, and pole loading capacity. The current contracts with third party attachers are being renegotiated. The updated contracts will continue to govern attachment standards and procedures and when additional specifications are developed, third party attachers will have the ability to provide input into the new specifications.

### **Conclusion**

FPUC's updated plan is largely a continuation of its current Commission-approved plan. Based on the review above, FPUC's plan has the information required by this Commission's Rule and Orders and it shall, therefore, be approved. This Commission notes that approval of FPUC's plan does not mean approval for cost recovery. FPUC shall consider the rate impact before taking proactive steps to improve its system to withstand severe weather events.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that Florida Public Utilities Company's updated 2016-2018 Storm Hardening Plan is hereby approved. It is further

ORDERED that the findings set forth in the body of this Order are hereby approved. It is further

ORDERED that the provisions of this Order, issued as proposed agency action, shall become final and effective upon the issuance of a Consummating Order unless an appropriate petition, in the form provided by Rule 28-106.201, Florida Administrative Code, is received by the Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on the date set forth in the "Notice of Further Proceedings" attached hereto. 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 this Order, this docket shall be closed upon the issuance of the consummating order.

By ORDER of the Florida Public Service Commission this 19th day of December, 2016.



CARLOTTA S. STAUFFER  
Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399  
(850) 413-6770  
www.floridapsc.com

Copies furnished: A copy of this document is provided to the parties of record at the time of issuance and, if applicable, interested persons.

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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 January 9, 2017.

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.

<b>Storm Hardening Requirements: Wooden Pole Inspection Program &amp; Ten Initiatives</b>
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<b>Eight-Year Wooden Pole Inspection Program</b>
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| 1. Implement an eight-year wooden pole inspection cycle by Order Nos. PSC-06-0144-PAA-EI and PSC-07-0078-PAA-EU. |
| 2. File an annual report with the Commission.  |
| 3. Provide cost estimates.   |

<b>Initiative 1 – A Three-Year Vegetation Management Cycle for Distribution Circuits</b>
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| 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.  |

<b>Initiative 2 – Audit of Joint-Use Attachment Agreements</b>
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| 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 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.   |

<b>Initiative 3 – Six-Year Transmission Inspection Program</b>
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| 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.  |

<b>Initiative 4 – Hardening of Existing Transmission Structures</b>
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| 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.   |

<b>Initiative 5 – Transmission and Distribution Geographic Information System</b>
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.
<b>Initiative 6 – Post-Storm Data Collection and Forensic Analysis</b>
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.
<b>Initiative 7 – Collection of Detailed Outage Data Differentiating between the Reliability Performance of Overhead and Underground Systems</b>
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.
<b>Initiative 8 – Increased Coordination with Local Governments</b>
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, multi-hazard infrastructure issues such as flood zones, area 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.
<b>Initiative 9 – Collaborative Research</b>
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.
<b>Initiative 10 – A Natural Disaster Preparedness and Recovery Program</b>
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.

<b>Florida Public Utilities Company</b>
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<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 2013-2015 were \$268,000.	3. Costs for 2016-2018 are estimated to be \$405,000.

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 2013-2015 were \$268,000.	3. Costs for 2016-2018 are estimated to be \$405,000.

<b>Initiative 1 – A Three-Year Vegetation Management Cycle for Distribution Circuits</b>	
Current Plan	Updated Plan
1. All feeders are on a three-year trim cycle.	1. No change
2. Laterals are on a six-year trim cycle.	2. No change
3. Costs for 2013-2015 were \$2,718,000.	3. Costs for 2016-2018 are estimated to be \$2,940,000.

Current Plan	Updated Plan
1. All feeders are on a three-year trim cycle.	1. No change
2. Laterals are on a six-year trim cycle.	2. No change
3. Costs for 2013-2015 were \$2,718,000.	3. Costs for 2016-2018 are estimated to be \$2,940,000.

<b>Initiative 2 – Audit of Joint-Use Attachment Agreements</b>	
Current Plan	Updated Plan
1. (a) Perform pole strength assessment during the eight-year wooden pole inspection cycle	1. (a) No change
(b) FPUC conducts a thorough joint-use audit once every five years in addition to the eight-year pole inspection.	(b) No change
2. All required data collected during inspections and stored in a database.	2. No change
3. Verify attachments have been made pursuant to current joint-use agreements during the eight-year wooden pole inspection cycle.	3. No change
4. Stress calculations performed on select poles during eight-year wooden pole inspection cycle.	4. No change
5. Costs for 2013-2015 were \$0.	5. Costs for 2016-2018 are estimated to be \$0.

Current Plan	Updated Plan
1. (a) Perform pole strength assessment during the eight-year wooden pole inspection cycle	1. (a) No change
(b) FPUC conducts a thorough joint-use audit once every five years in addition to the eight-year pole inspection.	(b) No change
2. All required data collected during inspections and stored in a database.	2. No change
3. Verify attachments have been made pursuant to current joint-use agreements during the eight-year wooden pole inspection cycle.	3. No change
4. Stress calculations performed on select poles during eight-year wooden pole inspection cycle.	4. No change
5. Costs for 2013-2015 were \$0.	5. Costs for 2016-2018 are estimated to be \$0.

<b>Initiative 3 – Six-Year transmission Inspection Program</b>	
Current Plan	Updated Plan
1. Develop procedures for climbing inspections of Company-owned 69 and 138 kV structures.	1. No change
2. Substations are fully inspected at least once a year.	2. No change
3. Costs for 2013-2015 were not tracked.	3. Costs for 2016-2018 are estimated to be \$87,000.

<b>Initiative 4 – Hardening of Existing Transmission Structures</b>	
Current Plan	Updated Plan
1. Continue to replace wooden poles on 69 kV lines.	1. No change
2. Plan is ongoing with no completion date.	2. No change
3. Costs for 2013-2015 were \$2,392,000.	3. Costs for 2016-2018 are estimated to be \$750,000.

<b>Initiative 5 – Transmission and Distribution Geographic Information System</b>	
Current Plan	Updated Plan
1. FPUC's plan includes forensic reviews.	1. No change
2. FPUC's plan includes underground versus 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. Currently being implemented.	5. No change
6. Costs for 2013-2015 were \$60,000	6. Costs for 2016-2018 are estimated to be \$62,100.

<b>Initiative 6 – Post-Storm Data Collection and Forensic Analysis</b>	
Current Plan	Updated Plan
1. FPUC has procedures developed to track all specific hurricane outages, post-storm data collection, and forensic analysis.	1. No change
2. Data is dependent upon storm events in FPUC's service area.	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. Collect outage data of overhead and underground facilities to evaluate reliability indices.	1. No change
2. Implementation is ongoing.	2. No change

<b>Initiative 8 – Increased Coordination with Local Governments</b>	
Current Plan	Updated Plan
1. Coordinate with local and county emergency service agencies within its service area. In addition, to provide personnel at county EOC's, during emergencies.	1. No change
2. Costs for 2013-2015 were \$0.	2. Costs for 2016-2018 are estimated to be \$0.

<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, hurricane and damage modeling towards further understanding the costs and benefits of undergrounding.	2. No change
3. FPUC will solicit participation from other utilities and organizations.	3. No change
4. Implementation is ongoing	4. FPUC has entered into a Memorandum of Understanding with the University of Florida's PURC, which extends research through December 31, 2018.
5. Costs for 2013-2015 were \$3,000.	5. Costs for 2016-2018 are estimated to be \$3,000.

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