

Writer's Direct Dial Number: (850) 521-1706  
Writer's E-Mail Address: bkeating@gunster.com

November 14, 2018

**E-PORTAL FILING**

Ms. Carlotta Stauffer, Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

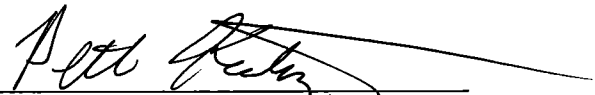
**Re: Docket 20180148-EI -- Review of 2019-2021 storm hardening plan, Florida Public Utilities Company.**

Dear Ms. Stauffer:

Attached for filing in the referenced docket, please find Florida Public Utilities Company's responses to Staff's First Data Requests in the referenced docket.

Thank you for your assistance with this filing. As always, please don't hesitate to let me know if you have any questions or concerns.

Kind regards,



Beth Keating  
Gunster, Yoakley & Stewart, P.A.  
215 South Monroe St., Suite 601  
Tallahassee, FL 32301  
(850) 521-1706

Enclosure

Cc:/Johanna Nieves – Office of General Counsel

Florida Public Utilities Company Response to Staff’s First Data Request for Docket No. 20180148-EI – Review of 2019-2021 storm hardening plan, Florida Public Utilities Company

- 1) Commission staff should collect additional details regarding meetings with local governments regarding vegetation management and identification of critical facilities as part of the Commission’s review of utility storm hardening plans.

Please discuss the Utility’s coordination with local governments. As part of this discussion please describe any lessons learned following recent storm events.

Response:

FPU has not conducted formal, documented meetings with local governments regarding vegetation management or critical facility issues. However, FPU does work closely with local governments related to vegetation management activities on a routine basis to ensure that activities comply with local ordinances and requirements. FPU also maintains a well-established list of critical facilities that are located within the relatively small service territory.

FPU has participated with local governments in all recent storm events and has provided information as needed during these events. Communication with local governments and restoration activities were very effective during the event. However, it was noted that critical to the success of the operation was having access to begin damage assessment and restoration prior to providing the general public access into the impacted area. It should also be noted that having fueling locations included as critical customers was important to the overall restoration success.

Additionally, please complete the table below for the years 2017 and 2018.

<b>Meetings with Local Government</b>					
<b>Entity</b>	<b>Date(s)</b>	<b>Topics</b>	<b>Pending Issues/Follow-up Items</b>	<b>Contact information provided to local authorities</b>	
				<b>Y</b>	<b>N</b>
City of Marianna	9/9/17 3/28/18	Storm Safety		Y	

Jackson County	8/3/18 9/5/17	Storm Safety	Priority of Customer Restoration	Y	
Calhoun County	9/6/17 9/18/17	Storm Safety		Y	
Nassau County	9/10/17 through	Storm Safety		Y	
City of Fernandina	9/7/17 9/8/17	Storm Safety		Y	

- 2) Commission staff should collect additional details regarding utility staffing practices at local EOCs as part of the Commission's review of utility storm hardening plans.

Please discuss the Utility's planned staffing practices at local EOCs. Please address in this discussion the total number of Utility personnel available to work in EOCs, the responsibilities of Utility personnel that work in EOCs, how the Utility communicates with EOCs that may not be staffed, and any lessons learned from storm events.

Response:

FPU continues to actively participate with local governments when planning for emergency situations which also includes how communications will occur for these situations. FPU will have company personnel located at county or city EOC's as requested by the local governments so that emergency communications, outage information and restoration progress can be communicated effectively. Additionally, contact information related to local governments is updated on an annual basis to ensure up to date information is available during storm events.

The number and responsibilities of FPU personnel located at each EOC will be in accordance with the needs and requirements of the specific local government. Typically, the responsibilities include being available to respond to questions regarding electric emergencies, current outages and restoration progress. The personnel assigned to the EOC will ensure that communication

requirements are followed and that follow up discussions occur in order to document any lessons learned from storm events.

As shown in the table below, certain EOC's do not require that electric utility personnel should be present at the EOC during the restoration event. In these situations FPU does not provide personnel to staff the EOC but does provide contact information so the communication is available if needed. Should an EOC require that personnel be provided to staff the EOC, FPU will make every effort to address the need.

Additionally, please complete the table below, listing all local EOCs in Utility's service territory.

<b>Utility staffing practices at local EOCs</b>		
<b>EOC in Service Territory</b>	<b>Number of Utility Staff</b>	<b>Planned daily hours scheduled for working in the EOC</b>
Jackson County	2	8
City of Marianna	0	As needed for meetings
Calhoun County	0	As needed for meetings
Liberty County	0	As needed for meetings
City of Bristol	0	As needed for meetings
Nassau County	2	12-15
City of Fernandina Beach	1	8

- 3) Commission staff should collect information on how each IOU prepares for and responds to roadway congestion, fuel availability, and lodging accommodation issues as part of the

Commission's review of utility storm hardening plans.

Please discuss the Utility's contingency planning for roadway congestion, fuel availability, and lodging accommodation including a timeline for when decisions are made (i.e. route selection, procuring fuel, locating of fuel sources, procuring lodging). As part of this discussion please describe any lessons learned following recent storm events as well as a discussion regarding the use of government resources during a storm event.

Response:

**ROADWAY CONGESTION** – FPU relies on state and local law enforcement to assist with any roadway congestion that would hinder our restoration efforts. These efforts are usually coordinated through the EOC for the impacted area. Actions taken are based on the track and intensity of the storm threat.

**FUEL AVAILABILITY-** FPU has established an emergency fueling contract in the Northwest Florida Division with a supplier who will provide on-site fueling services as required during emergency events. Within the Northeast Florida Division on Amelia Island, FPU has emergency fuel tanks that will be located at the Operations Center during the hurricane season so that on-site fuel can be readily available during emergency events.

**LODGING ACCOMMODATIONS-** FPU has in place a Lodging and Logistics Plan for key employees that are part of the restoration efforts during and after the storm. Lodging plans are made annually for the storm season and are flexible in nature so that these can be adjusted based on the track and intensity of storms that may impact our service territory. Coordination occurs with a variety of hotels in the area in order to ensure sufficient lodging accommodations are available should a storm threaten or impact our service areas.

**LESSONS LEARNED** – When storm damage occurs and after an area evacuation, allowing the utility to return early, prior to when the general public is allowed to return, allows quicker and more efficient damage assessment and restoration due to less traffic and easier access to damaged areas.

The restoration of service to fueling stations is now higher on our priority list than in the past. This change is based on the number of customers that have expressed their appreciation for the restoration of this necessity during storm events.

**GOVERNMENT RESOURCES UTILIZED** – FPU has utilized state and local law enforcement personnel for a variety of services during emergency situations. These law enforcement personnel are used for security at a variety of locations, used as escorts to allow safe travel for utility personnel and equipment performing restoration work, and to assist with Maintenance of Traffic (MOT) while performing restoration work on streets and highways. FPU has also used the Federal Emergency Management Agency (FEMA) to provide lodging and meals when other lodging options are not available.

- 4) Commission staff should collect information on all viable alternatives considered before selecting a particular storm hardening project as part of the Commission’s review of utility storm hardening plans.

Please discuss the Utility’s process for identifying storm hardening projects. Please include in this discussion, information regarding the economic considerations, historic reliability considerations, geographic area (including weather impacts), and customer considerations (number of customers).

Response:

Below are listed the most critical factors that are included in the analysis used to identify storm hardening projects.

- Facilities that provide electrical service to critical customers. This includes locations such as hospitals, nursing/rehabilitation homes, water treatment plants, waste water lift station, potable water plants, voting precincts, interstate highway crossings, etc.
- Facilities that provide electrical service to areas that historically have the highest number of customer outages as indicated on the annual FPU reliability reports.
- Facilities that provide electrical service to areas that are physically located near the ocean or can be impacted by flood waters. For FPU this includes certain locations on Amelia Island that can experience storm surge, high winds and salt spray contamination from the ocean. Also included are areas around the Chipola and Apalachicola Rivers that can experience flooding conditions which can impact the electrical infrastructure in the area.

- Facilities that provide electrical service to businesses that affect the overall economy and restoration efforts such as grocery stores, gas stations, hotels, restaurants, shopping centers, etc.
- Facilities that provide electrical service to inaccessible or heavy vegetation areas that can impede access and the restoration process during emergency situations.

Additionally, please provide an example of a storm hardening project where alternatives were considered and explain why one alternative was considered over another.

One of the significant storm hardening projects in our Northeast Florida Division on Amelia Island involved a 12.47 KV feeder which runs along US Highway A1A (South Fletcher Avenue) and is located adjacent to the Atlantic Ocean. This project was evaluated due to its proximity to the ocean, which results in reliability impacts from the salt spray contamination. It is also at higher risk for lightning damage, as well as being located along a highly traveled roadway. The initial analysis offered two options for the storm hardening. One option included an overhead design with poles and hardware designed to withstand hurricane force winds and the other involved undergrounding the distribution line and using pad mounted transformers and switchgear for the project.

The overhead option used larger class poles and more rigid hardware which was designed to withstand the hurricane force winds. Consideration was also given to the ability to manage the construction along the roadway, rapid restoration after a storm should damage occur and the ability of the design to withstand storm surge should this impact Amelia Island.

Alternatively, the underground option was designed using underground conductors placed in conduit, pad mounted transformers and switchgear and located along road right of way. Although this option was aesthetically better given the location, this project was significantly more expensive than the overhead option, gave some concern regarding the impact of storm surge on the pad mounted equipment and would have cost impacts to customers who would need to be able to accept service from an underground system. Based on these factors the decision was made to storm harden the distribution system using the overhead option.

- 5) Commission staff should explore the collection of uniform performance data for hardened vs. non-hardened and underground facilities, including sampling data where appropriate, as part of the Commission's review of utility storm hardening plans.

Please discuss the type of data the Utility plans to provide demonstrating performance of hardened vs. non-hardened facilities affected by wind only. Please discuss the type of data the Utility plans to provide to compare overhead to underground facilities on a comparable basis. Please discuss any sampling data that may be readily available. Please include the format, economic considerations, and how the Utility would collect this data.

Response:

FPU plans to incorporate a Post-Storm Forensics Assessment of a sample of facilities impacted by wind during a hurricane event. These sample areas will include facilities that have had significant impact from the wind and will include both storm hardened and non-storm hardened facilities. The following pages show the “FPU Post-Storm Forensics Data Collection Sheet” that will be used to collect data on both overhead and underground facilities.

FPU did not collect any forensics data during the 2016 – 2017 time period.

During future storm events, forensics data will be collected on a sample section of the system and this will be used to determine performance of the storm hardened and non-storm hardened facilities. In order to compare overhead and underground performance, FPU plans to review physical performance, outage rates and restoration times to make comparisons. Details of this comparison have not been completed at this time.



FPU Post-Storm Forensics Data Collection Sheet

Date of Data Gathering

**Storm Information**

- A. Storm Name
- B. Wind Information
  - 1 predominant direction
  - 2 intensity
  - 3 tornadoes (Y/N)
- C. Rain
  - 1 Amount (inches)
  - 2 Duration (hours)
- D. Storm
  - 1 Speed (mph)
  - 2 Wind field

**Location Information**

- A. Geographic Location of Observation (GIS) / Equipment ID #
- B. Soil Type
- C. Surface Grade
- D. Topology (ditch, hill, etc.)
- E. Flood zone? (Y/N)
- F. Exposure level (coastal, suburban, inner city, urban, rural)
- G. Attach pictures, video? (Y/N)
- H. Debris in area (describe)
- I. Tree Density (light, medium, heavy)

**Overhead Facilities Information**

**A. What was the object that failed? (check all that apply)**

- 1 Cross arm?
- 2 Pole?
- 3 Span/line?

**B. Observed cause of failure (check one)**

- 1 Debris
- 2 Tree
- 3 Wind only
- 4 Cascade

**C. Pole Information**

**1 Attributes**

a. Is the pole a primary feeder? Lateral? (check one)

- 1) Primary Feeder
- 2) Lateral

b. Types of trusses (describe)

c. Owner (name)

d. Construction Type of pole (check one)

- 1) Tangent
- 2) Angle
- 3) Right angle
- 4) Dead end

<b>2 Pre-wind condition</b>			
a. Wind grade			
b. Class			
c. Height (feet)			
d. Birth Year			
e. Type of pole (CCA, Penta, Creasote)			
f. Span length (approximate, in feet)			
g. Decay or deterioration? (Y/N)			
1) Circumference at decay (inches)			
h. Last inspected			
1) Year			
2) Receive treatment? (butt wrap, chemical, unknown)			
i. Braced? (Y/N)			
j. Guyed? (Y/N)			
<b>3 Break? (Y/N)</b>			
a. Height measurement at break (check one)			
1) Lower 1/3			
2) Middle 1/3			
3) Upper 1/3			
b. Circumference at break (inches)			
c. Break at foreign attachments? (Y/N)			
d. Break at own attachments? (Y/N)			
e. Direction of break			
<b>4 Is pole leaning? (Y/N)</b>			
a. Direction			
b. Angle from vertical			
<b>5 Own conductors</b>			
a. Number primary			
b. Number secondary			
c. Horizontal or vertical (H/V)			
<b>6 Attached equipment</b>			
a. Transformer (Y/N)			
b. Arrestor (Y/N)			
c. Cap bank (Y/N)			
d. Disconnect (Y/N)			
e. Re-closer (Y/N)			
f. Fuse (Y/N)			
g. Regulator (Y/N)			
h. Other (describe)			
<b>7 Per third party attachment</b>			
a. Owner (name)			
b. Type (coax, telephone, fiber, antenna)			
c. Number of cables			
d. Size (diameter in inches)			
e. Location on pole (height in feet)			
f. Guiding (Y/N)			
g. Authorized or unauthorized?			
h. Over-lashed? (Y/N)			
<b>8 Cascade</b>			
a. Is this an endpoint? (Y/N)			
b. What started cascade? (describe)			
c. What stopped cascade? (describe)			
d. Direction of lean/down?			
e. Type of guiding (describe)			
<b>9 What wasn't damaged? (describe)</b>			

**Underground Facilities Information**

**A. What was the object that failed?**

1 Equipment (check one)

- a. Transformer
- b. Switchgear
- c. Load break cabinet
- d. Capacitor bank
- e. Other (please describe)

2 Enclosure type (check one)

- a. Stainless steel
- b. Aluminun
- c. Mild steel
- d. Other (please describe)

3 Conduit? (Y/N)

4 Direct buried cable? (Y/N)

5 Underground vault? (Y/N)

**B. Attributes of facilities**

1 Type (check one)

- a. Feeder
- b. Lateral

2 Anchoring equipment

- a. Type of pad (describe)
- b. Type of attachment to pad (describe)

3 Age of facilities (years)

4 Pre-storm condition

- a. Date of last inspection (year)
- 1) Receive treatment? (describe)
- b. Cable depth relative to surrounding area (feet)
- c. Hardened? (Y/N)
- d. Installer (name)

**C. Observed cause of failure? (Y/N)**

1 Source of water (check all that apply)

- a. Storm surge
- b. Flood water

2 Type of water (check one)

- a. Fresh water
- b. Salt water

3 Tree uprooting? (Y/N)

- 6) Commission staff should seek additional information on the impact of non-electric utility poles on storm recovery as part of the Commission's review of utility storm hardening plans.

Please discuss the following:

- a. Procedures followed if a non-electric utility pole is identified as being unstable or on the verge of failing.

Response:

If a non-electric utility pole is determined to be dangerous to public safety, FPU would take steps to replace the pole immediately. After completion of the work, FPU would inform the non-electric utility that the pole was replaced and the circumstances that necessitated the replacement.

- b. Options an electric utility has if inspection of non-electric utility poles is not occurring.

Response:

Should the non-electric utility company not be performing inspections of its company owned poles, FPU would have the option to perform the inspection along with the normal eight year pole inspection cycle. If a pole is then identified as needing replacement, FPU would notify the non-electric utility company of the need to replace the pole or perform the replacement of the pole.

- c. Procedures followed when repairing/replacing non-electric utility poles during storm recovery (contact, billing, reimbursement, who does the repair).

Response:

Historically, FPU has replaced or repaired the storm damaged poles regardless of ownership. If the pole is replaced by FPU, the ownership of the pole is transferred to FPU and can be included in the utility owned pole count for annual pole rental billing purposes. There is no additional billing associated with the replacement. FPU then notifies the previous pole owner in writing that the pole has been replaced with an FPU owned pole.

- d. Procedures followed when repairing/replacing non-electric utility poles during non-storm events (contact, billing, reimbursement, who does the repair).

Response:

Historically, FPU has replaced or repaired the non-storm event damaged poles regardless of ownership. If the pole is replaced by FPU, the ownership of the pole is transferred to FPU and can be included in the utility owned pole count for annual pole rental billing purposes. There is no additional billing associated with the replacement. FPU then notifies the previous pole owner in writing that the pole has been replaced with an FPU owned pole.

- e. General locations of poles – throughout the service territory or in a certain location.

Response:

Non-electric utility owned poles are scattered throughout the service territory.

Additionally, please complete the table below.

Electric vs. Non-Electric Utility Poles
---

Total Number of Utility Distribution Poles		Total Number of Non-Electric Utility Distribution Poles that the Utility is attached to		Number of Attached Non-Electric Utility Distribution Poles Repaired following Hurricane Irma		Number of Attached Non-Electric Utility Distribution Poles Replaced following Hurricane Irma	
Feeders*	Laterals*	Feeders*	Laterals*	Feeders*	Laterals*	Feeders*	Laterals*
5026	21522	98	415	0	0	0	0

\* Split between Feeders and Laterals are estimated values. Total amounts are 2017 actuals.