

Mr. Wesley Taylor  
Public Service Commission  
Capital Center Circle Office Center  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

Transmitted Via Electronic Filing Web December 15, 2015

**Re: Docket No. 20170215-EU - Review of electric utility hurricane preparedness and restoration actions.**

All Information provided herein is in reference to Hurricane Irma 2017. Keys Energy Services was not impacted by Hurricanes Hermine, Matthew, Maria and Nate.

**Staging for Utility Personnel and Mutual Aid**

1. Please describe the pre-storm coordination process for Hurricanes Hermine, Matthew, Irma, Maria, and Nate. The description should include:
  - a. Dates and topics of internal meetings held after each storm was named.
    - i. Wednesday, September 6, 2017 – In person meeting with Directors/Supervisors/Engineers – review of storm procedures; work assignments; discussion on evacuation plans
    - ii. Friday September 8, 2017 – phone conference with Directors/Supervisors/Engineers – update from EOC regarding evacuation – urging all to evacuate or take shelter in KEYS building; update on mutual aid requests
    - iii. Saturday, September 8, 2017 – in person for those sheltering and conference call for those who evacuated – confirming all employees locations – review of methods to contact after storm
  - b. Dates and topics of external communication pertaining to mutual aid held after each storm was named.
 

Wednesday, September 6, 2017 calls to line contractors, tree contractors and food/laundry services – confirming availability, ironing out contract issues, discussing mobilization times/details
  - c. Date mutual aid was requested and nature of request.
 

Friday morning September 8, 2017 – requested line crews, tree crews, storm/safety assessors and food/laundry services
  
2. Please provide a detailed description of the utility’s allocation of storm duties for all personnel. This should include a description of each function and the number of utility personnel assigned.

Linemen (supervisors, leaders, journeyman, apprentices)	19	Repairing and replacing transmission and distribution facilities
Substation Electricians (supervisors, leaders, journeyman, apprentices)	8	Working in Substations; switching; repairing/rebuilding UG facilities
Tree Trimmers (and apprentices)	4	Clearing trees from ROWs
Damage/safety Assessors and Crew Foremen	12	Completing damage assessment and running mutual aid crews

GIS	1	Maintaining system and printing maps for visiting crews
Control Center	9	Overseeing Transmission and Distribution – dispatching crews as needed; interacting with customers
Project Engineers	3	Overseeing Crews; troubleshooting repair issues and material supply issues
Purchasing/Warehouse	7	Receiving and issuing materials
Fleets	6	Vehicle Maintenance, Fueling of all vehicles and generators
Support Services	6	Coordinating with contractors/mutual aid; EOC; food; lodging; media

3. When did the costs for Hurricanes Hermine, Matthew, Irma, Maria, and Nate begin to accrue for receiving mutual aid?

Friday, September 8, 2017

**Damage Assessment Process**

4. Please provide a detailed overview of the initial damage assessment process for Hurricanes Hermine, Matthew, Irma, Maria, and Nate, including the number of utility employees or contractors involved, their duties, and how initial damage assessment is disseminated within the utility to assist in restoration activities. Additionally, please provide photographs or other visual media that memorializes storm damage, which was documented during the initial damage assessment process.

Monday 9/11 morning KEYS line crews and engineering personnel who had not evacuated rode out all transmission facilities and the backbone of emergency feeders in the City of Key West and to the Naval Air Station. The 16 Linemen (supervisors, leaders, journeymen, and apprentices); 6 Electricians (supervisor, journeymen and an apprentices) and 3 Safety/damage assessors (GIS, Engineering Field Representative, Engineering Supervisor,) identified broken and down transmission poles; damaged transmission insulators and distribution conductor wrapped around transmission lines. There was extensive distribution damage including poles down, transformers down, lines down, broken insulators and lightning arrestors. A helicopter was also utilized for inspection of all facilities with a heavy focus on transmission circuits over the water. Generation crews worked to provide power to the local water desalinization plant until the Transmission line as re-energized.

Tuesday 9/12 KEYS crews continue with damage assessment in Key West, Key Haven, Stock Island and Naval Air Station and additional helicopter inspections throughout the service area. Restoration of same areas began.

With no cell phone service or internet service available, information was brought back into the office periodically for review and to prioritize work. The General Manager, T&D Director, Engineering Director and Engineering Supervisor set up twice daily meetings starting this day at 7 pm to coordinate overall effort and disseminate information. The General Manager, Engineering Director and Engineering Supervisor, along with other staff were living 24/7 at KEYS headquarters allowing continued late evening and early morning communication. The T&D Director and lineman were living 24/7 at the T&D building allowing continued late evening and early morning communication among them. Radio transmission were also curtailed so information had to be relayed from vehicle to vehicle (line of site) when working on the transmission system in the northern reaches of the territory. Initial contractor crews, previously contracted by KEYS for storm work and working in the area on other projects arrived with damage assessors, civil workers, and transmission and distribution personnel. This was approximately 100 personnel total.

Wednesday morning 9/13 KEYS crews continued working on Key West, Stock Island and Key Haven feeders. Contractor Crews including 10 damage/safety assessors began inspection of the remainder of the KEYS territory distribution (three substations). Information from the damage/safety assessors was provided to contractor foremen and to KEYS "bird doggers" who worked together to make work assignments. Additional contractors' crews began arriving on Wednesday. The transmission system was restored and power was provided to priority customers (airport, hospital) by the end of the day.

Here is a link to book of photographs an employee created for us.  
<https://share.shutterstock.com/action/welcome?sid=kIaM2jdmzbMWTwA&cid=SM-PBAPP>

5. Please provide a description of how damage assessment data is updated and communicated internally.

In the initial days, all field observations were brought into the office at the end of each day where, Engineering prepared work plan for the next day, which was handed out to birddoggers and general foremen for crews at the beginning of each work day.

Once communications were available, all information was added into the Milsoft Outage management system for tracking.

### **Restoration Workload**

6. Please provide a detailed description of how the utility determines when and where to start restoration efforts.

KEYS hurricane plan outlines the details of priority feeders. The Feeders are established and reviewed by both Monroe County and Key West Emergency Operations Management, KEYS follows the plan and adds in special requests that come up from the County Emergency Operations Center, Crews are assigned work that restores the greatest number of customers with the easiest fixes.

7. For Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please complete the following table on workload priority:

Personnel Responsible for Restoration Workload Assignments		
Title	Years of experience	Number of crews managed
Director of Engineering	30	Responsible for overall direction of all crews - 531
Director of T&D	28	33 Responsible for all KEYS Crews
Supervisor of Engineering	27	498 – responsible for all contractor crews – disseminated information to 7 KEYS personnel who then disseminated the information to contractor general foreman or foreman

8. Please provide a description of how restoration workload adjusts based on work completed and updates to damage assessments.

Crews are spread out working on priority feeders and services. Once complete, crews then work on the backbone of the remaining feeders. Assignments are provided to ensure commercial establishments such as hotels housing relief workers, grocery stores, gas stations, schools etc. receive power first to return normalcy to the community. Restoration to residential areas is prioritized so the easiest repairs restore the most customers and so forth. As work progresses, crews receive assignments to infrastructure that serve fewer numbers of customers and to time consuming repairs/replacements.

9. If applicable, please describe how mutual aid was determined to be no longer needed following Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

Mutual aid was determined no longer needed when every KEYS customer who could receive power had power. KEYS kept contractors beyond to assist with clean up and street light repairs.

### Staffing Considerations

10. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please respond to the following, please provide the following:
  - a. Days of lodging provided for Utility personnel (Person-Days)  
6 employees were lodged for a total of 45 nights
  - b. Days of lodging provided for mutual aid partners (Person-Days)  
Estimated 4,300 hotel nights
  - c. Number of meals provided for Utility personnel  
Between 9/15 and 9/28 KEYS' caterer Storm Services served 23,786 meals (breakfast, lunch & dinner). These were served to both KEYS employees and mutual aid partner employees. We do not have a breakdown between the two groups. Additional meals were provided 9/11-9/14 but KEYS did not track these as they were to the best of our ability working with our own supplies, hotels and restaurants who were cleaning out freezers
  - d. Number of meals provided for mutual aid partners  
See above
  - e. Number of Utility personnel injuries  
1 lost time injury - hand
  - f. Number of mutual aid partner injuries  
1 lost time injury – head injury
  - g. Number of Utility personnel fatalities  
0
  - h. Number of mutual aid partner fatalities  
0

Please note any delays in restoration associated with items e-h above.

There were none

11. Please provide a detailed description of when your Utility was considered fully restored from each named storm event.

KEYS considered itself fully restored - The last customer who could receive power had power – on September 30 - 20 days after the storm passed through KEYS service territory.

### Customer Communication

12. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please respond to the following for each county in the Utility's service territory affected by the storms.
  - a. Total number of customer accounts 31,000
  - b. Peak number of outages 31,000
13. Please provide how call center customer service representatives were utilized before, during and after Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

Monroe County called for a mandatory evacuation of all KEYS residents. The majority of call center customer service representatives evacuated prior to the storm and were not permitted to return until September 17. Customer Service Representatives that were back in town began accepting calls on September 20. Beginning September 25 through October

1 – Customer Service Representatives fielded calls and input all outage information into the KEYS computer information system.

14. Please provide the number of customer service representatives the Utility had during Hurricanes Hermine, Matthew, Irma, Maria, and Nate.
- a. Were there additional personal deployed or 3rd party entities utilized to help address customer contacts during each named storm event? If so, how many?

KEYS had approximately 7 Customer Service Reps answering calls from September 20th – September 24th. Beginning September 25<sup>th</sup>, KEYS had 17 customer service representatives and 2 control center coordinators available after Hurricane Irma. No third party entity was utilized. Of the CSRs – two were on other storm assignments leaving the remaining 15 to assist customers with outage information and billing concerns.

15. Please provide the number of customer contacts received by the customer call center(s) during Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

KEYS answered and handled 6,893 calls of the 8,325 calls presented between September 20th and October 1st.

16. Please provide all methods (call centers, email, Utility website, etc.) utilized to submit and collect customer contacts before, during, and after Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

KEYS collects customer contact information during sign up and with every customer contact (phone or in person). Additionally, bill inserts urge customers to call in with updates or to go on the website to update contact information. Visitors to the website see a banner that encourages updating contact information. Similar requests are issued on social media, in radio ads and during community activities.

17. Please describe the step by step process(es) by which customer contacts are addressed before, during, and after a named storm event. If different during each timeframe, please describe the step by step process during each separately.

Before and during a named storm event, KEYS utilizes the Milsoft Outage Management system. All calls are handled by an automated system that associates the phone number with a service address and is then used to predict outages. Customers may leave a message with specific concerns. KEYS Control Center personnel call back customers whose numbers are not associated with a service address or customers who have left a message that require personal contact.

After the Storm, KEYS generally suspends the automated system and has customer service representatives handle calls from 9 a.m. until call volume slows down and after this the control center coordinators will answer calls. This occurs because the outage management system doesn't predict outages properly due to the volume of calls. The information from the phone calls are entered into the computer information system.

During this process, representatives are primarily providing reassurance and time estimates regarding restoration. Eventually, calls are placed back on the automatic outage management system.

- a. Did the Utility identify any delays in restoration as a result of addressing customer contacts related to Hurricanes Hermine, Matthew, Irma, Maria, and Nate? If so, please provide detail.

There were no delays to restoration as a result of customer contacts

18. Please provide whether or not customer contacts are categorized (by concern, complaint, information request, etc.) If so, how are they categorized? If not, why not?

Calls are categorized:

- Safety concerns
- Poles Down
- Transformers
- Trees
- Miscellaneous
- Customer Side issue

19. Please provide a detailed description of how customer service representatives are informed of restoration progress.

- a. Is there a script provided to each customer service representative to relay restoration progress to customers? If so, what is the process by which the script is created?

Prior to Hurricane Season, the Control Center Supervisor and Communications Director has a training session with all CSRs. They review how to enter outage information in the outage management system and they review important questions to ask a customer. Each morning the Control Center representative provides the CSRs with an update of areas that are being worked on, and what has been restored. Scripts are not effective – every call is different and every customer has a unique situation that they need to describe

20. Please describe the process the Utility uses to notify customers of approximate restoration times. The response should include at a minimum:

- a. How restoration time estimates were determined.  
Restoration times are estimated based on the damage assessment and is revised daily by field employees who are seeing what is happening in the field
- b. How customers are notified.  
Customer are notified by radio announcements - with Irma, our PIO had to drive to the radio station because all phone service was unavailable. Customers are also notified with direct text messages, automated calls, social media posts and the website outage management system
- c. How restoration time estimates are updated.



At first, restoration time estimates are updated based on reports from the field at the end of each day in the beginning. As time progresses, estimates are updated throughout the day based on reports coming in from the field.

- d. How restoration time estimates are disseminated internally, to the county and state Emergency Operations Centers, and to the public.  
Restoration times are disseminated internally with email updates to CSRs, and the County and State EOC through email updates to FMEA and phone calls. Public is updated with social media, traditional media and text push.

### Material Considerations

21. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please provide a description of how vehicle fuel was procured for Utility personnel and mutual aid partners. As part of the response, please answer the following:
  - a. Whether or not the Utility has fuel stored for these types of events  
KEYS has fuel storage: 4,000 Gallons of Diesel and 4,000 Gallons of Gasoline
  - b. Whether or not fuel shortage was an issue during these events  
Fuel shortage was an issue until Friday September 15. Fuel deliveries were regular beginning Saturday, September 16
  - c. Whether or not there were any delays due to fuel shortage  
There were no restoration delays due to fuel
  - d. Whether or not there were enough vehicles available during these events/any issues mobilizing crews  
Vehicles were available for use throughout the storm. KEYS experienced occasional delays in getting crews through the Monroe County checkpoints
22. Please detail any complications or delays such as shortage or delayed delivery of materials for Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

KEYS experienced shortages in transformers and had to reach out to the secondary market and to other utilities as far away as Kentucky in order to get transformers. There were short delays (6-24 hours) in restoration as a result of transformer shortages.

Storm hardened poles (ductile iron) were not readily available and wood poles were used during the restoration. This will create additional work when the temporary wood poles need to be replaced by the required storm hardened poles. There were no restoration delays due to poles.

Transformers and poles were the worse shortages but we also had shortages of insulators, lightning arrestors and street light materials all which caused work-a-rounds. We ran out of chain saw blades and tarps.

KEYS had extreme difficulty in getting shipping carriers to come into Monroe County throughout the restoration process and as late as two weeks into the restoration effort. KEYS found a workaround – materials were delivered to Homestead Utilities and shuttled to Key West. This created brief time delays and drain of needed staff to coordinate and at times make the drives. Even FedEx and UPS returned materials to the manufactures stating “refused” when the items were never attempted.



**Restoration Process**

23. Please provide a summary timeline of the utility's restoration process for each hurricane: Hermine, Matthew, Irma, Maria, and Nate. The timeline should include, but not limited to, staging, stand-down, deployment, re-deployment, allocation, mutual aid, release of mutual aid, and date last outage was restored.

Sept 6 – Various Contractors contacted to discuss availability and clarify contractual issues

Sept 8 – Contractors called and asked to begin mobilizing. KEYS elected to use private contractors at this point because of the track of Hurricane Irma would mean that other utilities in the state would be able to release crews.

Sept 11 – Transmission line is restored

Sept 12 - First wave of private contractors arrive; Three priority feeder backbones are restored.

Sept 13 – Private contractors go to work

Sept 30 Last customer that can receive power receives power.

September 31 – Private Contractors and Mutual Aid Utility Workers released

Here is a table showing when Contractors Arrived:

<b>Contractor</b>	<b>Approximate Arrival Date</b>
<b>Michels</b> (includes civil, distribution, drilling, Quality Line, MiTech, Rauhorn, transmission, and Warwick)	9/12/2017
<b>MiTech</b>	9/12/2017
<b>TMS</b>	9/12/2017
<b>Asplundh</b>	9/13/2017
<b>Diversified</b>	9/13/2017
<b>Leidos</b>	9/13/2017
<b>FMPA</b>	9/15/2017
<b>ABB</b>	9/16/2017
<b>EPS</b>	9/16/2017
<b>Kissimmee Utilities Authority</b>	9/17/2017
<b>ECG</b>	9/18/2017
<b>PCS</b>	9/18/2017
<b>PDA</b>	9/18/2017
<b>CPS</b>	9/19/2017
<b>DH Elliott</b>	9/21/2017

<b>Circuit Breaker Sales &amp; Service</b>	9/22/2017
<b>Bradley Infrared</b>	9/29/2017

Here is a table showing when Backbone Feeders were restored:

<b>Feeder Name</b>	<b>Date</b>	<b>Time Energized</b>
WSS 2	9/17/2017	16:18
WSS 3	9/14/2017	9:26
WSS 4	9/15/2017	15:16
WSS 5	9/16/2017	13:23
WSS 6	9/13/2017	18:57
WSS 7	9/16/2017	13:21
KDS 2	9/16/2017	13:35
KDS 4	9/16/2017	13:35
KDS 5	9/15/2017	16:00
KDS 8	9/19/2017	11:41
KDS 9	9/13/2017	10:07
KDS 10	9/16/2017	12:44
KWD 2	9/14/2017	12:56
KWD 3	9/16/2017	16:35
KWD 4	9/16/2017	13:26
KWD 5	9/16/2017	13:46
TSS 2	9/14/2017	10:21
TSS 3	9/13/2017	18:16
TSS 4	9/13/2017	18:48
TSS 5	9/14/2017	18:46
SSS 2	9/14/2017	11:58
SSS 3	9/13/2017	18:18
SSS 4	9/15/2017	16:55
US1 2	9/17/2017	16:11
US1 3	9/16/2017	15:44
US1 5	9/16/2017	6:07
US1 6	9/13/2017	22:19
BCS 2	9/19/2017	13:32
BCS 3	9/13/2017	19:41
BCS 4	9/14/2017	19:52

BCS 5	9/15/2017	20:04
CKS 2	9/17/2017	17:57
CKS 3	9/18/2017	15:48
CKS 4	9/18/2017	17:43
BPS 2	9/15/2017	20:40
BPS 3	9/20/2017	20:03
BPS 4	9/21/2017	17:03

24. Please explain how the Utility validates adherences and departures from its storm preparation plan.

Following every hurricane, KEYS staff identifies “what worked and what didn’t work.” Changes are incorporated into the Hurricane Plan. The Hurricane Irma “debrief” is underway and KEYS has established three task forces to review and identify future improvements. Those tasks forces are “Operations”; “Contractors” and “Building and Employee Issues”. The outcomes will be incorporated into the Hurricane Procedures Manual for 2018 - this will be complete by May 2018.

- a. If the Utility does not assess departures from its storm plan, explain why not.
  - b. If the Utility does not document or otherwise memorialize departures from its storm plan, explain why not.
  - c. Have departures from the Utility’s storm preparation plan resulted in modification of the storm preparation plan during 2015 through 2017? If so, please explain how with examples.
25. Please explain how the Utility validates adherences and departures from its storm restoration plan.
- a. If the Utility does not assess departures from its storm restoration plan, explain why not.
  - b. If the Utility does not document or otherwise memorialize departures from its restoration storm plan, explain why not.
  - c. Have departures from the Utility’s storm restoration plan resulted in modification of the storm restoration plan during 2015 through 2017? If so, please explain how with examples.

Same as question above

**Outages**

26. Please identify all counties, including reporting regions/division for each county if applicable, that were impacted (had outages or damage) due to Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

Monroe County

27. Please complete the table below summarizing the wind speed and flooding impacts by county in the utility's service area. If the requested information is not available by county, please provide the information on a system basis. Please provide this information for Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

Hurricane Irma Weather Impact				
County	Maximum Sustained Winds (MPH)	Maximum Gusts (MPH)	Maximum Rainfall (inches)	Maximum Storm Surge (Feet)
Monroe	120 mph	150-160 mph	12.54 inches	5-8 feet

**Hardened and Non-Hardened Structures**

28. Please provide a county map or graphic indicating the geographic locations where the Utility's infrastructure was storm hardened after 2006. For purposes of this question, do not include vegetation management.

Uploaded separately

29. Please complete the table below summarizing hardened facilities that required repair or replacement as a result of Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

All facilities that have been storm hardened to PSC standards were in good standing following Hurricane Irma. None needed repair no replacement.

<b>Hardened Facilities</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<b><i>Transmission</i></b>		
Structures	0	0
Substations	0	0
<b>Total</b>	0	0
<b><i>Distribution</i></b>		
Poles	0	0
Substation	0	0
Feeder OH	0	0
Feeder UG	0	0
Feeder Combined	0	0
Lateral OH	0	0
Lateral UG	0	0
Lateral Combined	0	0
<b>Total</b>	0	0
<b><i>Service</i></b>		
Service OH	0	0
Service UG	0	0
Service Combined	0	0
<b>Total</b>	0	0

30. Please complete the table below summarizing non-hardened facilities that required repair or replacement as a result of Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

<b>Non-Hardened Facilities</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<b><i>Transmission</i></b>		
Structures	0	10
Substations	0	0
<b>Total</b>	0	10
<b><i>Distribution</i></b>		
Poles	0	625
Substation	0	0
Feeder OH	37	0
Feeder UG	0	0
Feeder Combined	37	0
Lateral OH	Not Available	Not Available
Lateral UG	Not Available	Not Available
Lateral Combined	Not Available	Not Available
<b>Total</b>		
<b><i>Service</i></b>		
Service OH	Not Available	650 distribution transformers
Service UG	Not Available	Not Available
Service Combined	Not Available	Not Available
<b>Total</b>	Not Available	Not Available

31. For Hurricanes Matthew, Hermine, Irma, Maria, and Nate, please provide a ranking of the five highest volume of outage causation that impacted the Utility's service area.

Hurricane Irma was the only storm that impacted Keys Energy Services.

32. For Hurricanes Matthew, Hermine, Irma, Maria, and Nate, please provide a ranking of the top five drivers that protracted service restoration time.
- 1 Poles down
  - 2 General damage to infrastructure caused by wind
  - 3 General damage to infrastructure caused by trees down
  - 4 Transformers down and delays in obtaining transformers
  - 5 Extensive storm debris blocking access to roads and facilities

33. If applicable, please describe any damage prevented by flood monitors during Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

NA

34. How many outages were avoided by automated feeder switches during Hurricanes Matthew, Hermine, Irma, Maria, and Nate? Please explain how the data for each event was collected.

No outages were avoided due to automated feeder switches during Hurricane Irma. KEYS transmission system tripped taking all distribution feeders out of service

**Critical Infrastructure Restoration**

35. Please complete the table below for all critical infrastructure facilities (CIFs), by location (city/county) and facility type, which lost power, the restoration time for the CIFs and the cause of the outage (such as wind, storm-surge, flooding, debris, etc.) and facilities structure type that required replacement and/or repair. Please provide this information for Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

36.



Hurricane (IRMA) – CIF						
CIF Name/Type (i.e. Hospital)	County/ Location	Restoration Time	Outage Cause	Number of Facilities Requiring		
					Repair	Replace
Lower Keys Medical Center	Monroe County/Stock Island	9/16/17 @ 16:07	Hurricane			
Key West International Airport	Monroe County/ Key West	9/13/17 @ 10:07	Hurricane	<i>Transmission</i>		
Gato Building	Monroe County/ Key West	9/14/17 @ 12:56	Hurricane	Structures	0	0
Monroe County Courthouse	Monroe County/ Key West	9/14/17 @ 12:56	Hurricane	Substations	0	0
Navy	Monroe County/ Boca Chica	9/13/17 @ 19:41	Hurricane	<b>Total</b>	0	0
Coast Guard	Monroe County/ Key West	9/14/17 @ 09:26	Hurricane	<i>Distribution</i>		
Police & Fire	Monroe County/ Key West	9/17/17 @ 16:18	Hurricane	Poles	Unknown	0
EOC	Monroe County/ Key West	9/14/17 @ 10:21	Hurricane	Substation	0	0
Sheriff Radio Tower	Monroe County/ Summerland Key	9/21/17 @ 17:03	Hurricane	Feeder OH	Unknown	
Sheriff Radio Tower	Monroe County/ Ramrod	9/18/17 @ 17:43	Hurricane	Feeder UG	0	0
Florida Keys Aqueduct	Monroe County/Ramrod	9/18/17 @ 17:43	Hurricane	Feeder Combined	Unknown	
Florida Keys Aqueduct	Monroe County/Stock Island	9/14/17 @ 11:58	Hurricane	Lateral OH	Unknown	
Florida Keys Aqueduct	Monroe County/ Key West	9/14/17 @ 12:56	Hurricane	Lateral UG	0	0
Florida Keys Aqueduct	Monroe County/ Cudjoe Key	9/18/17 @ 15:48	Hurricane	Lateral Combined	Unknown	
Clear Channel Radio Tower	Monroe County/ Stock Island	9/16/17 @ 15:44	Hurricane	<b>Total</b>	0	
Clear Channel Radio Tower	Monroe County/ Cudjoe Key	9/18/17 @ 15:48	Hurricane	<i>Service</i>		
Clear Channel Radio Tower	Monroe County/ Key West	9/14/17 @ 12:56	Hurricane	Service OH		
				Service UG	0	0
				Service Combined		
				<b>Total</b>	0	

### Underground Facilities

37. Please provide an assessment of the performance of underground facilities during Hurricanes Matthew, Hermine, Irma, Maria, and Nate. As part of this assessment please summarize the number of underground facilities that required repair or replacement for each event.

Overall Underground facilities performed well. More than 80 percent of primary underground facilities required no attention after backbone feeders were restored. Less than 20 percent of the primary underground facilities had damage to the transformer or

the riser necessitating attention including pulling cable. KEYS experienced no underground primary cable failures.

38. Please provide a discussion what programs/tariffs the utility has in place to promote

KEYS does not have any type of program or tariff that promotes underground utilities.

- a. Undergrounding of new construction (e.g., subdivisions)
- b. Conversion of overhead to underground

Please file all responses electronically no later than December 15, 2017 from the Commission's website at [www.floridapsc.com](http://www.floridapsc.com), by selecting the Clerk's Office tab and Electronic Filing Web Form. Please contact me at [wtaylor@psc.state.fl.us](mailto:wtaylor@psc.state.fl.us) or at 850.413.6175 if you have any legal questions, or contact Emily Knoblauch for technical questions at [eknoblau@psc.state.fl.us](mailto:eknoblau@psc.state.fl.us) or at 850.413.6632.

Sincerely,

*/s/Wesley Taylor*

Wesley Taylor  
Attorney

WDT/as

cc: Office of Commission Clerk  
Office of Public Counsel ([kelly.jr@leg.state.fl.us](mailto:kelly.jr@leg.state.fl.us), [sayler.erik@leg.state.fl.us](mailto:sayler.erik@leg.state.fl.us))