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FPSC - COMMISSION CLERK

December 15, 2017

Mr. Braulio Baez, Executive Director  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399-0850

Re: Docket No. 20170215-EU – Review of Electric Utility Preparedness and  
Restoration Actions - Staff's First Data Request – November 14, 2017

Dear Mr. Baez:

In response to the Staff's First Data Request dated November 14, 2017, The City of Tallahassee is submitting the following information. As the City's electric service territory was only impacted by Hurricanes Hermine and Irma, the information provided below is focused on those two storms.

### 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.**
  - b. **Dates and topics of external communication pertaining to mutual aid held after each storm was named.**
  - c. **Date mutual aid was requested and nature of request.**

#### Hermine

- a. The City of Tallahassee participated on twice daily conference calls with Leon County Emergency Management starting August 30, 2017. The purpose of these calls was to obtain weather briefings and coordinate preparations on a county wide basis. Internal City of Tallahassee Electric planning calls/meetings followed each Leon County Emergency Management to coordinate the planning for the Electric Utility response.
- b. The information provided below is not a comprehensive list of communications efforts related to Hermine, only pertains to work involving or mentioning "mutual aid" and/or "additional resources." Additionally, the social media data reflects original posts by the City of Tallahassee and does not include "shares" and "retweets".

News Releases (issued to the media, emailed to subscribers and posted on the City's website)



September 2, 2016 - [City Responds to Hurricane Hermine Impacts](#)  
September 3, 2016 - [Collaborative Recovery Efforts Yield Significant Progress](#)  
September 4, 2016 - [Electric Crews to Receive Additional Support](#)  
September 6, 2016 - [Power Restoration Continues](#)  
September 7, 2016 - [Power Restoration and Debris Removal Continues](#)  
September 8, 2016 - [Help Available for Navigating Post-Hurricane Recovery](#)

\*In 2017, the City of Tallahassee redesigned its webpage, Talgov.com. The 2016 News Releases linked above, redirect to the “old” webpage. The information is accurate and correct; it only appears a little different than the 2017 News Releases.

Instant Alerts (emails to Utility Customers)

September 3, 2016 - [Collaborative Recovery Efforts Yield Significant Progress](#)  
September 4, 2016 - [Electric Crews to Receive Additional Support](#)  
September 6, 2016 - [Power Restoration Continues](#)  
Social Media Posts to [COTNews account on Facebook](#)  
September 2, 2016 at 4:32 p.m. - [City continues to respond to outages & impacted roads](#)  
September 3, 2016 at 12:04 p.m. - [Mutual Aid Crews Assisting Tallahassee](#)  
September 3, 2016 at 6:04 p.m. - [City Officials Provide Update](#)  
September 3, 2016 at 7:15 p.m. - [Process of Power Restoration](#)  
September 4, 2016 at 7:40 a.m. - [Thank You to Our Mutual Aid Partners](#)  
September 4, 2016 at 8:30 a.m. - [We’re Thankful to Crews Helping Restore Services](#)  
September 4, 2016 at 12:48 p.m. - [Gulf Power Sends Crews to Assist](#)  
September 4, 2016 at 4:13 p.m. - [Gulf Power Crews Getting Ready](#)  
September 5, 2016 at 7:21 a.m. - [Restoration Efforts](#)  
September 9, 2016 at 4:23 p.m. - [City Leaders Show Appreciation](#)  
Social Media Posts to [COTNews account on Twitter](#)

All of the posts mentioned above for Facebook were also posted to Twitter. The content was altered slightly to for this particular social media platform; however, the content and timing of posts for both social media networks were very similar.

- c. The initial mutual aid request was made through the Florida Municipal Electric Association on or about August 30, 2016. The initial request was for 30-40 resources. The initial request was fulfilled on September 2, 2016. A second request for additional mutual aid resources was made and fulfilled on September 3, 2016. A third mutual aid request was made on September 4, 2016. A fourth and final mutual aid request was made on September 5, 2016 and fulfilled on September 6, 2016.

## IRMA

- a. The City of Tallahassee Electric had its first formal internal storm meeting on IREM on Friday September 1, 2017. This meeting was Electric staff only and began the discussion on resources needed and preliminary implementation of the base storm plan. Commencing on September 5, there were daily planning meetings that included both City staff and the Leon County Emergency Management office. The purpose of the daily meetings/calls was to obtain weather briefings and coordinate preparations on a county wide basis.
- b. The information provided below is not a comprehensive list of communications efforts related to Irma, only pertains to work involving or mentioning “mutual aid” and/or “additional resources.” Additionally, the social media data reflects original posts by the City of Tallahassee and does not include “shares” and “retweets”.

News Releases (issued to the media, emailed to subscribers and posted on the City’s website)

September 5, 2017 - [Citizens Urged to Prepare as Hurricane Irma Approaches Florida](#)

September 11, 2017 - [City Hurricane Irma Response and Recovery Efforts](#)

September 13, 2017 - [City Crews Become Mutual Aid after Receiving It](#)

Instant Alerts (emails to Utility Customers)

September 5, 2017 - [Citizens Urged to Prepare as Hurricane Irma Approaches Florida](#)

September 6, 2017 - [Prepare Now For Hurricane Irma](#)

September 10, 2017 - [Prepare, Respond, Recover](#)

September 11, 2017 - [City Hurricane Irma Response and Recovery Efforts](#)

Social Media Posts to [COTNews account on Facebook](#)

September 5, 2017 at 2:07 p.m. - [Citizens Urged to Prepare as Hurricane Irma Approaches](#)

September 7, 2017 at 9:00 a.m. - [Prepare Now for Hurricane Irma](#)

September 8, 2017 at 12:12 p.m. - [We’re Thankful for Crews from Lafayette Utilities System](#)

September 10, 2017 at 8:39 a.m. - [Thank you to Bryan Municipal Utilities](#)

September 10, 2017 at 11:53 a.m. - [Mutual Aid Crews Secured](#)

September 11, 2017 at 3:11 p.m. - [Welcome Lincoln Electric System](#)

September 11, 2017 at 6:15 p.m. - [Latest Update on Hurricane Irma Response](#)

September 12, 2017 at 5:16 a.m. - [Update from Lincoln Electric System](#)

September 12, 2017 at 8:07 a.m. - [Progress Report with Bryan Municipal Utilities](#)

September 13, 2017 at 9:32 a.m. - [Community Shows Appreciation for Mutual Aid Crews](#)

September 13, 2017 at 4:53 p.m. - [City Crews Offer Aid to Other Cities](#)

September 14, 2017 at 4:40 a.m. - [City Crews Leave to Help Others](#)

September 14, 2017 at 9:53 a.m. - [City Crews Arrive in Gainesville](#)  
 September 15, 2017 at 2:28 p.m. - [Recap of City Restoration](#)  
 Social Media Posts to [COTNews account on Twitter](#)

All of the posts mentioned above for Facebook were also posted to Twitter. The content was altered slightly to for this particular social media platform; however, the content and timing of posts for both social media networks were very similar.

- c. The initial mutual aid request was made through the Florida Municipal Electric Association on Monday September 4, 2017. The initial request was for 640-800 total resources. Due to the number of mutual aid requests in the state, the City only received a total of 72 mutual aid resources (not including contract vegetation management. These resources arrived on September 10<sup>th</sup> and 11<sup>th</sup>.

While Tallahassee was not impacted by Maria or Nate, the following are external communications issued by the City concerning these two storms.

News Releases (issued to the media, emailed to subscribers and posted on the City's website)

November 21, 2017 - [City Crews Provide Mutual Aid to U.S. Virgin Islands](#)  
 Social Media Posts to [COTNews account on Facebook](#)

November 21, 2017 at 10:30 a.m. - [City Crews Provide Mutual Aid to U.S. Virgin Islands](#)

Social Media Posts to [COTNews account on Twitter](#)

The post mentioned above for Facebook was also posted to Twitter. The content was altered slightly to for this particular social media platform; however, the content and timing of posts for both social media networks were very similar.

**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.**

The City of Tallahassee Electric Utility assigns primary and secondary storm assignments for all Electric utility personnel. These include the following categories:

*Hermine*

<i>Category</i>	<i>Primary</i>	<i>Secondary</i>
<i>System Operations</i>	<i>21</i>	<i>21</i>
<i>Electric Restoration</i>	<i>119</i>	<i>119</i>
<i>Generation</i>	<i>87</i>	<i>45</i>
<i>Leon County EOC Support</i>	<i>6</i>	<i>6</i>

<i>Damage Identification</i>	<i>34</i>	<i>20</i>
<i>Outage Management Call Support<sup>1</sup></i>	<i>13</i>	<i>13</i>
<i>City Call Center</i>	<i>118</i>	<i>0</i>
<i>Logistics Support</i>	<i>6</i>	<i>6</i>
<i>Administrative Support</i>	<i>2</i>	
<i>Labor Pool (as needed)</i>	<i>0</i>	<i>61</i>
<i>Traffic Operations</i>	<i>10</i>	<i>10</i>
<i>Traffic Restoration</i>	<i>14</i>	<i>14</i>

*Irma*

<b><i>Category</i></b>	<b><i>Primary</i></b>	<b><i>Secondary</i></b>
<i>System Operations</i>	<i>21</i>	<i>21</i>
<i>Electric Restoration</i>	<i>119</i>	<i>119</i>
<i>Generation</i>	<i>87</i>	<i>45</i>
<i>Leon County EOC Support</i>	<i>6</i>	<i>6</i>
<i>Damage Identification</i>	<i>34</i>	<i>20</i>
<i>Outage Management Call Support<sup>2</sup></i>	<i>13</i>	<i>13</i>
<i>City Call Center</i>	<i>146<sup>3</sup></i>	<i>16</i>
<i>Logistics Support</i>	<i>6</i>	<i>6</i>
<i>Administrative Support</i>	<i>2</i>	
<i>Labor Pool (as needed)</i>	<i>0</i>	<i>61</i>
<i>Traffic Operations</i>	<i>10</i>	<i>10</i>
<i>Traffic Restoration</i>	<i>14</i>	<i>14</i>

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

Hermine: September 1, 2016

IRMA: September 8, 2017

<sup>1</sup> Does not include City Call Center Support

<sup>2</sup> Does not include City Call Center Support

<sup>3</sup> Includes Customer Operations (130) and other utility Departments (16)

## 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.**

Hurricane Hermine: Initial damage assessment was conducted by twenty assessment teams each consisting of two persons from various areas of the Electric Utility. Hurricane Hermine did extensive damage to the City of Tallahassee's electrical system knocking most of the systems electric circuits. Line Crews were initially assigned to the eight-critical listed in the City of Tallahassee Electric Emergency Guide. Once the eight critical circuits were restored the line crews were re-assigned to individual substations. Each Line Crew was assigned an assessment team which moved ahead of the line crew providing a drawing of the damage they found, material list and guidance on which damage should be repaired next to expedite restoration. This process was continued throughout the restoration process until most of the system had been restored. At that point, the assessment crews were sent to investigate individual calls that were coming in. Very little to no pictures were taken of storm damage during Hurricane Hermine.

Hurricane Irma: Initial damage assessment was conducted by twenty assessment teams each consisting of two persons from various areas of the Electric Utility. Hurricane Irma caused lock outs on sixty-three breakers and reclosers on the electrical system. Line Crews were initially assigned restoration priorities based on the City of Tallahassee Electric Emergency Guide critical circuit list. The number of critical circuits had been increased to one hundred and twenty, and a priority system for the critical circuits had been established. An assessment team was assigned to each critical circuit. They rode the entire circuit and produced a drawing of the damage they found with a material list. Smart phones had been provided to each assessment team and pictures were taken at each damage site. All this information was provided to the Work Order Coordinator who distributed it to the Line Crews. This process was continued throughout the restoration process until most of the system had been restored. At that point, the assessment crews were sent to investigate individual calls that were coming in. Attached are samples of pictures taken of damage from Hurricane Irma.

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

Hurricane Hermine: The information provided to the crews for restoration was entirely a paper process.

Hurricane Irma: The Utility had established a standard assessment form which was provided to the assessment teams. The assessment team would bring in the form which would be attached to a map and locate ticket. The would be provided in paper for to the Work Order Coordinator who would distribute to the Line Crews. Attached are examples.

### Restoration Workload

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

The City of Tallahassee follows an industry standard restoration process that includes the following order of implementation. While these are listed in order, there are steps that are being performed simultaneously – for example, generation and transmission restoration will be occurring simultaneously.

- Power Supply Resource Restoration, if needed
- Transmission restoration: This is done on a priorities basis to first move power from power plants or ties into the system, then followed by transmission to critical substations, at least one transmission line to each substation, and finally the balance of the transmission system.
- Distribution Restoration: This is done on a priority basis with first priority being critical community facilities, followed by non-critical main feeders, followed by non-critical branches, followed by individual outages and then reconnects.

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

Personnel Responsible for Restoration Workload Assignments (Hermine)		
Title	Years of experience	Number of crews managed
Manager – T&D	23	Responsible for all restoration crews
Line Crew Foreman	31	0
Line Crew Foreman	33	11 service trucks
Line Crew Foreman	38	4
Line Crew Foreman	39	4
Line Crew Foreman	37	4
Line Crew Foreman (coordinator)	31	1

Personnel Responsible for Restoration Workload Assignments (Irma)		
Title	Years of experience	Number of crews managed
AGM-Power Delivery	32	Responsible for all assessment and restoration
Line Crew Foreman	34	11 service trucks
Line Crew Foreman	39	4
Line Crew Foreman	40	4
Line Crew Foreman	38	4
Line Crew Foreman (coordinator)	32	1

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

The Electric Power Delivery (formally T&D) planning group (made of the positions listed in #7) met twice daily to determine what had been restored and to review what remained to be restored. At the beginning of both Hurricane Hermine and Irma, focus was on restoring critical circuits which re-established the essential City services. After the critical circuits were restored crews were moved to each station begin restoring service throughout the City simultaneously. Once the major circuits were restored, crews were moved to outages based on the customer count.

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

At the twice daily status update meetings (described in #8), a review was made of what restoration work remained and the mutual crew's make-up. Once it was determined that the work remaining could be completed with only one day's work remaining for any of the mutual aid crews, a recommendation was to department management to release the mutual aid when work assigned had been completed. The ultimate decision to release mutual aid crews was made by the General Manager – Electric.

**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)**

Tallahassee only provided 30 person days of lodging for Utility personnel during Irma. None was provided for other storms.

**b. Days of lodging provided for mutual aid partners (Person-Days)**

Hermine – 556 Person Days<sup>4</sup>

Irma – 718 Person Days<sup>5</sup>

**c. Number of meals provided for Utility personnel**

Hermine – 2,100<sup>6</sup>

Irma – 1,624<sup>7</sup>

**d. Number of meals provided for mutual aid partners**

Hermine – 1,223<sup>8</sup>

Irma – 1,389<sup>9</sup>

**e. Number of Utility personnel injuries**

Hermine – None

Irma – None

**f. Number of mutual aid partner injuries**

Hermine – None

Irma – None

**g. Number of Utility personnel fatalities**

Hermine – None

Irma – None

**h. Number of mutual aid partner fatalities**

Hermine – None

Irma – None

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<sup>4</sup> This is based on hotel rooms purchased by the City – does not mean all were used during the storm.

<sup>5</sup> This is based on hotel rooms purchased by the City – does not mean all were used during the storm.

<sup>6</sup> Represents meals provided by caterer. Does not include any meals directly purchased by crews in the field.

<sup>7</sup> Represents meals provided by caterer. Does not include any meals directly purchased by crews in the field.

<sup>8</sup> Represents meals provided by caterer. Does not include any meals directly purchased by crews in the field.

<sup>9</sup> Represents meals provided by caterer. Does not include any meals directly purchased by crews in the field.

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

Hermine – None

Irma – None

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

Using the generally accepted definition provided by the state (98% restored), Tallahassee was fully restored on the following dates.

Hermine – September 8, 2016

Irma – September 12, 2017

**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**

Hermine – 118,745 customer service points

Irma – 119,716 customer service points

**b. Peak number of outages**

Hermine - ~73,680

Irma - 37809

**13. Please provide how call center customer service representatives were utilized before, during and after Hurricanes Hermine, Matthew, Irma, Maria, and Nate.**

During all phases of both Hermine and Irma, the City's utility call center staff were utilized in responding to and addressing customer inquiries. The call center team primarily communicated with customers by phone.

**14. Please provide the number of customer service representatives the Utility had during Hurricanes Hermine, Matthew, Irma, Maria, and Nate.**

Hermine - 118

Irma – 146

**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?**

During Irma, an additional 19 City employees from outside the City's Customer Operations team were assigned to the Call Center. No 3<sup>rd</sup> party firms were utilized.

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

Hermine – 48,723  
Irma – 14,400

**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.**

As a normal course of business, the City's electric customers have multiple means by which to interact with the City. These include the traditional call center operations as well as e-mail, a smart phone app (Digitally) and via the City's website. All methods were used before, during and after Hermine and Irma.

**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.**

All customer contacts, regardless of method, were entered into the electric utility outage management system during both Hermine and Irma.

**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.**

No restoration delays were identified in either Hermine or Irma because of addressing 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?**

Customer contacts are not categorized.

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

As part of the standard status updating, the customer service representatives are provided with the electric utility updates on restoration status.

- 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?**

The City does not utilize a script

**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.**  
b. **How customers are notified.**  
c. **How restoration time estimates are updated.**  
d. **How restoration time estimates are disseminated internally, to the county and state Emergency Operations Centers, and to the public.**

For Tallahassee, the Electric Power Delivery staff develops an estimated restoration time based on the known damages. This is provided to City Management and the Leon County Emergency Management System as it is identified. The City of Tallahassee and Leon County coordinate public release of information.

It was not the practice during Hermine or Irma to provide specific estimated restoration times for a specific area or customer. Daily updates did include both areas that had been worked and the areas targeted for the crew deployment. Customers are notified of this information through new releases and instant alert messages directly to the customer.

**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**

The City of Tallahassee maintains fuel storage for its fleet. It also has contract access to additional fuel.

- b. **Whether or not fuel shortage was an issue during these events**

Tallahassee had no fuel related issues.

- c. **Whether or not there were any delays due to fuel shortage**

Not Applicable

- d. **Whether or not there were enough vehicles available during these events/any issues mobilizing crews**

Fueling was completed at night with no delay.

**22. Please detail any complications or delays such as shortage or delayed delivery of materials for Hurricanes Hermine, Matthew, Irma, Maria, and Nate.**

During Hermine, The City had a dedicated logistics person acquiring the required materials. While there were some shortages experienced, none of these resulted in delay in restoration efforts.

No material issues during Irma.

**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.**

Hermine:

- Staging and Prep: Started August 30, 2016
- Restoration Efforts: Commenced with storm impacts to the territory on September 1, 2016
- Stand-down: Restoration efforts were suspended ~11:30 PM on September 1, 2016 due to winds
- Re-deployment: Restoration efforts restarted ~7:45 AM on September 2, 2016
- Mutual Aid: arrivals began on September 2 and continued through September 6<sup>th</sup>.
- Release of Mutual Aid: Release of mutual aid started on September 9 with full release on September 10<sup>th</sup>.
- Last Outage Restored: September 9, 2016

Irma:

- Staging and Prep: Started September 7, 2017
- Restoration Efforts: Commenced with storm impacts to the territory on September 10, 2016
- Stand-down: Restoration efforts were suspended ~4:30 AM on September 11, 2016 due to winds
- Re-deployment: Damage identification activities commenced ~9:30 AM on September 11. Restoration efforts restarted ~12:30 PM on September 11.
- Mutual Aid: arrivals began on September 10 and continued through September 11<sup>th</sup>.
- Release of Mutual Aid: Release of mutual aid occurred on 14<sup>th</sup>.
- Last Outage Restored: September 14

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

- 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.**

During the restoration process, changing circumstances are addressed as they are identified. If there is a determination that a change in the base storm plan is required, it is done based on information provided to the Electric leadership team. The leadership consulted is dependent on what the situation is (i.e.: restoration, logistics, materials support, etc.) but will include the General Manager – Electric and the appropriate Assistant General Manager(s). These departures from the base storm plan are reviewed in the post storm lessons learned process and the associated changes incorporated into the base storm plan.

Following Hermine, the City of Tallahassee conducted a robust lesson learned that included input from various stakeholders. This included:

- Community feedback sessions
- Participation on the Leon County Emergency Manager Center lessons learns
- Cross functional employee teams that included restoration, engineering, logistics, mutual aid representatives, customer services and administrative support.
- Consultation with representatives from the State of Florida

Based on the feedback received from these sessions, the Electric Utility has revised its base storm plan to incorporate the lessons that were learned. These changes include, but are not limited to:

- Updating the priority restoration list
- Revising the organizational structure within the storm response teams
- Developing more detailed mutual aid plans
- Revising the storm response plant to focus on feeder and branch restoration on a simultaneous basis versus the historical feeder first then branch restoration approach.

In addition to the changes made to the Electric Utility storm plans, the City, on an organizational wide basis, has made several changes to storm response plans. These have included, but are not limited to:

- Enhanced pre-storm coordination with nursing homes and assisted living facilities and assigned full time staff as single points of contact for these facilities.

- Enhanced collaboration with neighborhood associations to enhance pre—storm neighborhood preparation planning and post-storm neighborhood communications.
- In conjunction with Leon County, enhanced the external communications with WFSU the local public broadcasting radio.

**25. Please explain how the Utility validates adherences and departures from its storm restoration plan.**

- If the Utility does not assess departures from its storm restoration plan, explain why not.**
- If the Utility does not document or otherwise memorialize departures from its restoration storm plan, explain why not.**
- 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.**

See answer to 24

**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.**

Leon 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.**

Weather Impact (*estimated – Source NOAA)				
County	Maximum Sustained Winds (MPH)	Maximum Gusts (MPH)	Maximum Rainfall (inches)	Maximum Storm Surge (Feet)
Leon – Hermine	60*	70*	6*	0
Leon – Matthew	23	30	0	0
Leon – Irma	43	55	2	0
Leon - Maria	N/A	N/A	N/A	N/A
Leon – Nate	25	31	0.52	0

**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.**

The City has not provided a graphic since the graphic would be throughout the entire service territory.

**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.**

<b>Hardened Facilities – Hermine &amp; Irma</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<i><b>Transmission</b></i>		
Structures	None	None
Substations	None	None
<b>Total</b>		
<i><b>Distribution</b></i>		
Poles	None	None
Substation	None	None
Feeder OH	None	None
Feeder UG	None	None
Feeder Combined	None	None
Lateral OH	None	None
Lateral UG	None	None
Lateral Combined	None	None
<b>Total</b>		
<i><b>Service</b></i>		
Service OH	None	None
Service UG	None	None
Service Combined	None	None
<b>Total</b>		

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 - Hermine</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<b><i>Transmission</i></b>		
Structures	1	0
Substations	0	0
<b>Total</b>	1	0
<b><i>Distribution</i></b>		
Poles	0	127
Substation	0	0
Feeder OH	Note 1	Note 1
Feeder UG	Note 1	Note 1
Feeder Combined	Note 1	Note 1
Lateral OH	Note 1	Note 1
Lateral UG	Note 1	Note 1
Lateral Combined	Note 1	Note 1
<b>Total</b>	Note 1	Note 1
<b><i>Service</i></b>		
Service OH	Note 1	Note 1
Service UG	Note 1	Note 1
Service Combined	Note 1	Note 1
<b>Total</b>	Note 1	Note 1

Note 1: The City's records are not maintained by this type of detail. There were 196 different locations where major restoration work was performed. There was 300+ difference locations where service restoration work was performed.

<b>Non-Hardened Facilities - Irma</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<b><i>Transmission</i></b>		
Structures	1	0
Substations	0	0
<b>Total</b>	1	0
<b><i>Distribution</i></b>		
Poles	0	36
Substation	0	0
Feeder OH	Note 1	Note 1
Feeder UG	Note 1	Note 1
Feeder Combined	Note 1	Note 1
Lateral OH	Note 1	Note 1
Lateral UG	Note 1	Note 1
Lateral Combined	Note 1	Note 1
<b>Total</b>	Note 1	Note 1
<b><i>Service</i></b>		
Service OH	Note 1	Note 1
Service UG	Note 1	Note 1
Service Combined	Note 1	Note 1
<b>Total</b>	Note 1	Note 1

Note 1: The City's records are not maintained by this type of detail. There was a total of 381 different locations where major/minor restoration work was performed.

**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.**

Hermine:

- Classified Unknown
- Limb/tree on line
- Wind
- Defective equipment
- Lightning

Irma:

- Limb/tree on line
- Classified Unknown
- Lightning
- Equipment Overload
- Animal

**32. For Hurricanes Matthew, Hermine, Irma, Maria, and Nate, please provide a ranking of the top five drivers that protracted service restoration time.**

There were no drivers that protracted the service restoration times.

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

None

**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.**

As a matter of safety due to the mutual aid crews on the system, Tallahassee disables the automatic feeder switching systems during both Hermine and Irma.

### **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.**

To answer this question, Tallahassee has listed those facilities that were identified as the top priority at the time Hermine and Irma impacted the system. After Hermine, the City's priority list was revamped and expanded into a multi-tier list. Only the Tier 1 critical customers have been noted in the information below. All times are in 24-clock format.

The City's records do not allow for a ready identification of the specific facilities replaced/repared. In the case of all of these outages, the damage was to the distribution system requiring repairs/replacement.

<b>Hurricane Hermine – CIF</b>						
<b>CIF Name/Type (i.e. Hospital)</b>	<b>County/ Location</b>	<b>Restoration Time</b>	<b>Outage Cause</b>	<b>Number of Facilities Requiring</b>		
Hospital	Leon	9/2 @ 1014	Wind/Trees		<b>Repair</b>	<b>Replace</b>
Utility Facility	Leon	9/2 @ 0642	Wind/Trees	<i>Transmission</i>		
City Communications 1	Leon	9/3 @ 0011	Wind/Trees	Structures		
City Communications 2	Leon	9/6 @ 2326	Wind/Trees	Substations		
Airport	Leon	9/2 @ 1421	Wind/Trees	<b>Total</b>		
City Communications 3	Leon	9/4/ @ 1443	Wind/Trees	<i>Distribution</i>		
<b>Hurricane Irma – CIF</b>						
<b>CIF Name/Type (i.e. Hospital)</b>	<b>County/ Location</b>	<b>Restoration Time</b>	<b>Outage Cause</b>	<b>Number of Facilities Requiring</b>		
City Communications	Leon	9/11 @ 1513	Wind/Trees		<b>Repair</b>	<b>Replace</b>
City Police/Communications	Leon	9/11 @ 2311	Wind/Trees	<i>Transmission</i>		
City Communications	Leon	9/11 @ 2126	Wind/Trees	Structures		
City Utility Facility	Leon	9/11 @ 1239	Wind/Trees	Substations		
Hospice	Leon	9/12 @ 0344	Wind/Trees	<b>Total</b>		
Rehab Hospital	Leon	9/12 @ 0344	Wind/Trees	<i>Distribution</i>		
Nursing Home	Leon	9/10 @ 2228	Wind/Trees	Poles		
Nursing Home	Leon	9/12 @ 0344	Wind/Trees	Substation		
Nursing Home	Leon	9/11 @ 2010	Wind/Trees	Feeder OH		
Nursing Home	Leon	9/12 @ 0853	Wind/Trees	Feeder UG		
Nursing Home	Leon	9/11 @ 2127	Wind/Trees	Feeder Combined		
Nursing Home	Leon	9/11 0302	Wind/Trees	Lateral OH		
Nursing Home	Leon	9/11 @ 2128	Wind/Trees	Lateral UG		
Nursing Home	Leon	9/11 @ 2114	Wind/Trees	Lateral Combined		
Nursing Home	Leon	9/11 @ 1832	Wind/Trees	<b>Total</b>		
Nursing Home	Leon	9/12 @ 1832	Wind/Trees	<i>Service</i>		
Nursing Home	Leon	9/11 @ 2204	Wind/Trees	Service OH		
Nursing Home	Leon	9/11 @ 1532	Wind/Trees	Service UG		
Nursing Home	Leon	9/11 @ 2204	Wind/Trees	Service Combined		
Nursing Home	Leon	9/11 @ 2117	Wind/Trees	<b>Total</b>		

### **Underground Facilities**

**36. 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.**

Tallahassee had no underground primary failures.

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

**a. Undergrounding of new construction (e.g., subdivisions)**

For all new residential construction that involves 6 homes or more within the City limits, the City installs the new services as underground for free. For new residential construction that involves 6 or more homes outside of the City limits, the City charges a flat fee of \$100 per lot for the installation of the new services as underground.

**b. Conversion of overhead to underground**

The City has had a long-standing practice of converting any branches from overhead to underground at no cost as long as 100% of the customers who are fed from the branch agree to the conversion costs associated with the change in delivery point.

After Hermine occurring, the City Commission approved a cost sharing program by which the City's Electric utility will pay 25% of the conversion cost for feeders provided the developer/customer agrees to: paying 75% of the conversion cost; provides the easements/ROW for any equipment at no cost; and pays the conversion costs associated with the change in customer delivery point.

Please feel free to let me know if there is additional information needed or if there are any questions.

Yours truly,



Robert E. McGarrah  
General Manager – Electric

Cc: Reese Goad  
Alison Faris  
James Barnes  
Richard Ash  
Leigh Anne Payne  
Greg Ozbun  
Karen Webb  
David Byrne  
Henry Gainer  
Amy Zubaly, FMEA