

Kenneth M. Rubin Senior Counsel Florida Power & Light Company 700 Universe Boulevard Juno Beach, FL 33408-0420 (561) 691-2512 (561) 691-7135 (Facsimile) Ken.Rubin@fpl.com

December 15, 2017

-VIA ELECTRONIC FILING-

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

RE: Docket No.: 20170215-EU

In re: Review of electric utility hurricane preparedness and restoration actions.

Dear Ms. Stauffer:

Enclosed please find Florida Power & Light Company's responses to Staff's First Data Request in the above referenced docket. Please note that while Staff's First Data Request seeks responses related to Hurricanes Hermine, Matthew, Irma, Maria and Nate, FPL's service territory was not impacted by Hurricane Maria. As a result, unless otherwise indicated in the actual response, FPL's responses do not include information or data related to Hurricane Maria.

If you should have any questions regarding this transmittal, please contact me at (561) 691-2512.

Sincerely,

<u>/s/ Kenneth M. Rubin</u> Kenneth M. Rubin Fla. Bar No. 349038

Enclosure

Florida Power & Light Company

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QUESTION:

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.

RESPONSE:

FPL's (including FPL's Power Delivery organization) emergency preparedness plans are established in in the NextEra Energy/FPL Corporate Emergency Management Plan (CEMP), which contains the documents, along with the principles of the National Incident Management System (NIMS) that NextEra Energy/FPL has adopted, that provide a framework by which NextEra/FPL can respond effectively to all threats and hazards, including major storms.

- a. For Hurricanes Hermine, Matthew and Irma, while the storms' development/path was being monitored as the storm developed, consistent with FPL's emergency preparedness plans, formal conference calls began to occur 96 - 72 hours prior to forecasted impacts to FPL's service territory and continued to occur daily (in many instances more than once each day as described below) until service was essentially restored. No calls were held for Hurricanes Nate (limited impact and quick restoration) and Maria (did not impact FPL). For Hermine, Matthew and Irma, regularly scheduled conference calls were held to gather and provide information, ensure key processes/guidelines were reviewed, operational barriers identified, needs for assistance identified, and policies and decisions communicated consistently. The Power Delivery Planning Call, the Distribution Operations Call and the Transmission Operations Call occurred twice a day and primarily included key Power Delivery management personnel involved in storm preparation/restoration. Topics of discussion included weather updates, forecast damage estimates, system status/plans, resource status/plans, logistics, safety issues, human resource issues, IT/systems update, critical checklist reminders and other open issues. FPL's Command Center call occurred one or two times a day and primarily included senior executives from NextEra Energy/FPL. Topics discussed included weather updates, forecast damage estimates, projected customer impacts, information affecting all corporate departments, potential load/generation/fuel issues and business unit reports.
- b. For storms Hermine, Matthew, and Irma, external communications with customers and external stakeholders concerning the acquisition of external resources to assist with restoration efforts were provided through various means (e.g., press releases, social media, radio, TV, FPL.com and all other customer facing channels) and began shortly after resources were acquired and ended after restoration was complete. No communications with customers and external stakeholders concerning the acquisition of external resources were provided for Hurricanes Maria and Nate.

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c. FPL initially requested mutual aid (line/vegetation resources) for Hurricanes Hermine, Matthew and Irma on August 25, 2016, October 4, 2016 and September 5, 2017, respectively. Mutual aid was not requested for Hurricanes Maria or Nate.

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QUESTION:

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.

RESPONSE:

Please see Attachment No. 1 to this response for a detailed description of the utility's allocation of storm duties for storm personnel, including each functional role and the number of utility personnel assigned.

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FPL Storm Roles^{*}

	# of	
Position	Personnel	Description
Area ETR Coordinator	19	Back-up to the Planning Section Chief Data analysis & management Manage ETRs & Resources to meet customer commitment Reporting and communication to management as needed Proactively manage expiring ETRs Quickly resolve expired ETRs Review performance and make recommendations for quicker resolution times Perform Customer call back duties Provide technical assistance to patrol personnel, crews and storm administrators
Associate Patroller	163	Utilize the Damage Assessment Application to report damage Documenting locations & work required on Circuit Maps Assists other patrollers in conducting detailed lateral patrols to document all secondary work required including identification of customers who cannot accept power / service Complete all necessary paperwork associated with the 5 patrols
Associate Patroller - Short Term	27	Utilize the Damage Assessment Application to report damage Documenting locations & work required on Circuit Maps Assists other patrollers in conducting detailed lateral patrols to document all secondary work required including identification of customers who cannot accept power / service Complete all necessary paperwork associated with the 5 patrols
Branch Directors (DSBN)	3	Responsible for all aspects of an Emergency Response Developing restoration objectives Managing all operations Responsible for all persons involved in Emergency Response

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Crew Dispatcher - Workbase	26	Communicate with Restoration Crews Provide information about trouble tickets to Restoration Crews Update, review and refer trouble tickets Enter Green tickets for restoration purposes
Customer Information Coordinator	15	Provide support to customer service coordinator Establish contact and update customers Review latest news releases regarding the storm Provide customer service to walk-in and call in customers at work base
Customer Representative	53	Provide support to customer service coordinator Establish contact update customers Review latest news releases regarding the storm Provide customer service to walk-in and call in customers at work base
Customer Service Coordinator	18	Provide support to customer service activities Establish contact and update customers Review latest news releases regarding the storm Provide customer service to walk-in and call in customers at work base
Customer Walk Up Rep	12	Provide support to customer service coordinator Establish contact and update customers Review latest news releases regarding the storm Provide customer service to walk-in and call in customers at work base
Environmental	18	Identify special concerns Identify storm drains, wildlife or wetlands concerns at staging site Identify any wildlife, wetlands or regulatory issues that may be present within the restoration area Ensure Environmental Oil Shed is set up
Extendo Stick Operator	27	Re-fuses blown single phase transformer fuse switches Clearing of very small tree limbs from lines with Extendo Attachment Could be asked to perform patroller duties when not assigned to Extendo Tickets
Fleet Services	113	Ensure vehicles are secured, maintained and fueled Identify the number of rental vehicles / equipment needed in support of restoration efforts

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FPL Vegetation Mgt. Coordinator	24	Manage Vegetation workload assignments Resource management (start and stop times; who's coming in & who's leaving) Assure that work performed satisfies Restoration Crews Follows OSHA, Federal, State and Local safety requirements Investigation of resource movement needs to heavily affected areas Timesheets; transition plans to off hours Pre landfall checklist Finalize paperwork associated with the completed work
Site Safety	6	Inform Incident Commander and work bases with safety Issues Conduit Safety Orientations & Safety Briefings Support storm site in acquiring replacement PPE for out of date equipment
HR Compensation & Payroll	32	Assists with HR Management & HR Teams Provides communicating, policy and procedure updates Answer storm payroll & timesheet questions
Incident Commander	23	Establish and review Personnel/Organization Status Implement Communication Plan Implement Safety Plan Initiate Restoration Process
Info & Intel Sect Chief	23	Updates work management systems (TCMS2 / DA Register) Assists with the preparation of roll-up status reports REDi knowledge Employee communication Responsible for Damage Assessment Keep workflow coming in for resources and execution Daily ETR callbacks
Inventory Services Rep	67	Secure inventory services facilities, equipment & vehicles Coordinate material request & assess material needs Coordinate and administer Loaned Tool Program

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LAN/PC Support Administration	58	Setup support for printers, computers Test and set up networks at staging sites Provide desktop support
Logistics Liaison	12	Assist Planning Section Chief and/or Info & Intel Section Chief as requested Ensure emergency supplies for work base are available Ensure FPL Emergency Identification items are available for issue Assist in managing crew check in/out process Confirm lodging with PSC
Logistics Section Chief (LSM)	21	Obtaining equipment, material and supplies needed for the storm restoration operation Processing requisitions and preparing purchase orders Managing Staging Sites
Office Assistant	19	Performs routine clerical and organizational tasks Answer phones and take messages Fax, scan and copy documents Retrieve information when requested Monitor and maintain office supplies
Operations Section Chief	26	Safety (ensure all employees receive On-Boarding Safety Plan.) Production Lead knowledge of daily goals & execution commitments Make sure the Restoration Strategy is followed
Patrol Lead	18	Ensure patrol safety Assist with Damage Assessment updates, questions or issues Schedule Damage Assessment Patrols to Patroller Teams Understand Damage Assessment Application Understand the Restoration Strategy
Planning Section Chief	17	Manage resources to meet Restoration Strategy Assist / Implement restoration priorities and development of daily work plan Manages incoming / outgoing personnel Interfaces with FPLCC for resource requirements Ensures REDi is up to date

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Production Lead	127	Manage workload assignments to FPL and/or non- FPL restoration workers Resource management (start and stop times; who's coming in & who's leaving) Assure that work performed satisfies FPL construction standards Follows OSHA, Federal, State and Local safety requirements Investigation resource movement needs to heavily affected areas Timesheets; transition plans to off hours Pre Land fall Checklist Finalize paperwork associated with the completed work
Public Information Officer (AIM)	15	Provide support to customer service coordinator Establish contact and update customers Review latest news releases regarding the storm Provide customer service to walk-in and call in customers at work base
Restoration Process Coordinator	58	Update the work management systems (TCMS2 / DA Register) Assists with the preparation of roll-up status reports Assists Storm Production Lead with any obstacle from permitting ticket completion
Field Safety Rep	8	Inform Incident Commander and work bases with safety issues Conduct field visits Assist and conduct incident investigations
Senior Patroller	78	Utilize the Damage Assessment Application to report damage Documenting locations & work required on Circuit Maps Assists other patrollers in conducting detailed lateral patrols to document all secondary work required including identification of customers who cannot accept power / service Complete all necessary paperwork associated with the 5 patrols
Site Coordinator	94	Track Logistics Team Monitor and confirm crew movement Update REDi

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Site Controller Command Center	8	At Command Center performs same functions as Site Coordinators Track Logistics Team Monitor and confirm crew movement Update REDi
Storm Administrator (STAR)	67	Update the work management systems (TCMS2 / DA Register) Assists with the preparation of roll-up status reports Assists Storm Production Lead with any obstacle from permitting ticket completion
Storm Feeder Controller	6	Accept / Release switching authority from / to Dispatch Control Center To repair feeder backbone by troubleshooting and issuing switching orders and clearances.
Switching Coordinator	13	Accepts switching authority transfer from Dispatch Center Coordinate switching and restoration efforts Provides technical assistance to other storm personnel
Utility Person(Runner)	30	Acts as a messenger or a guide for service restoration personnel Can assist the Storm Production Lead if requested
General Support	157	This team acts as an overall support role being tasked with anything from decision making to setting up additional meetings/calls.
HR Storm Support	110	This team works to help employees with anything from temporary housing to storm related finances.

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IT storm support	601	Supports FPL's storm restoration applications (OCS, TCMS, RSV, REDi, CALLS, Condition Assessment, Damage Assessment, etc.) Supports critical IT communication systems such as networks, infrastructure, radio, satellite, fleet truck connectivity, etc. Setup support for all hardware (CForts, storm staging sites, printers, servers, computers, telecommunications, etc.) including tests and set up networks at staging sites Supports movement, relocation, recovery and restoration of critical systems, servers, data centers, applications and hardware maintenance as related to technology infrastructure and system integrity Overall coordination of intra-IT communications and conference calls, storm training, represents IT on BU conference calls, track system/infrastructure trouble issues, provides summary reports for CIO, NEE Leadership, works back to command centers from the field to support critical systems, servers, data centers, applications and hardware maintenance as related to technology infrastructure and system integrity Provide desktop support and accounting for IT people (post storm and storm riders) Other duties as needed, including field work when called out for business needs
Logistics Support	509	This team supports the organization with everything from booking lodging and transportation to setting up and tearing down sites
Marketing/Communication	145	M&C's Emergency Communication Team provides communication support for all-hazards and to all stakeholders, internally and externally.

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		This operations and support team includes Distribution employees from line-workers to mapping support that conduct restoration activities
Power Delivery Operations and Support	2107	Also includes the Transmission/Substation Support Team: Substation Specialists (94),Power Supply (92), Transmission/Substation Rapid Responder (P&C) (89),Transmission/Substation Patrol (61), Transmission Specialist(57), Transmission/Substation Rapid Responder (T-Line) (32) Transmission Substation Team Leader(31), Protection and Control (30), Transmission Field Support (4), Transmission Substation Logistics Liaison (1)
PGD Support	14	PGD Incident Response Team (5), Siren Restoration Team (9)
Billing - Customer Accounts	119	This is a business continuity role and these employees are not deployed to support storm restoration.
BUS - CSFO Core Team	34	This role consists of Customer Advisors supporting the business unit by providing business customers with support for storm related questions during an event; may report to regular work location
Care Center Assistance Person	54	This role is responsible for providing logistical support to call center operations and personnel
Customer Service Support	44	This is a business continuity role and these employees are not deployed to support storm restoration
Payment Processing	18	This is a business continuity role and these employees are not deployed to support storm restoration
Phone Center - Lead Representative	3	This role provides process and escalation support for Call Center Representatives
Phone Center- Administration	24	This role manages budget and logistical support for Care Center
Phone Center-CIC	13	This role is responsible for handling emergency services

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Phone Center-Clerical	5	This role handles scheduling and payroll reporting of Call Center Representatives
Phone Center-MIS	17	This role coordinates and monitors call routing, IVR messaging, forecasting, and storm reporting
Phone Center- Representative	278	This role handles customer calls related to outage and regular business
Phone Center-Supervisor	33	This role supervises Call Center Representatives
Phone Center-Training	17	This role provides storm training for Call Center Representatives
RES - CSFO Core Team	9	This is a business continuity role and these employees are not deployed to support storm restoration
Revenue Recovery	13	This is a business continuity role and these employees are not deployed to support storm restoration
Total	5,668	

*Note: This table presents the vast majority of storm roles and approximate number of positions in each. Depending on the size of the storm and extent of the damage, the approximate number of personnel in each position would vary.

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QUESTION:

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

RESPONSE:

FPL does not specifically track dates it begins to accrue costs for receiving mutual aid versus recording all other storm related costs. However, FPL utilizes distinct work orders (WO) to track the total costs for each storm. These WOs are established once certain internal criteria are met for storm charges to be incurred in accordance with the Company's storm accounting policy. Below are the dates WOs were opened for each storm:

Hurricane	WO Open
Hermine	8/31/16
Matthew	10/4/16
Irma	9/5/17

Note: FPL did not incur any mutual aid costs associated with Hurricanes Maria or Nate.

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QUESTION:

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.

RESPONSE:

For Hurricanes, Hermine Matthew and Irma, FPL utilized its storm damage assessment process, which occurs in two stages, pre-landfall and post-landfall. Pre-landfall, FPL's meteorologist (1 FPL employee) notifies FPL's Situation Unit Chief (1 FPL employee) of a potential tropical cyclone event that may begin to impact FPL's service territory. The Situation Unit Chief and Situation Unit personnel (2 FPL employees) then initiate/execute the running of FPL's damage forecast model and begin to analyze estimated damage data pertaining to a specific tropical cyclone. As meteorological models begin to produce projections that may impact our service territory, the damage forecast model begins to compute forecasted damage assessments. These assessments provide estimated information (e.g., infrastructure damage, construction manhours to restore service) as far as five or more days out from projected impact, facilitating the determination of initial resource needs as well as where the resources need to be prepositioned/positioned to optimize restoration efforts. These models are updated at least daily and this information is disseminated and made available company-wide through an internal FPL website and is maintained/updated on a 24/7 basis. Post-landfall, FPL uses a three-pronged approach to gather damage assessments: (1) the forecasted damage developed pre-land fall remains available on the FPL internal website and the models are regularly run through landfall and forecast damage is compared with the influx of trouble tickets from FPL's outage management system (which provide outage, outage cause and damage data) and air/land patrol damage assessments (which provide detailed damage assessments for all impacted feeders and laterals); (2) the trouble ticket data, which is maintained in real time, is housed within our outage management system, where necessary employees can access and view outage ticket information; and (3) air/land patrol damage assessment data is housed within FPL's patrol damage assessment application, maintained and updated on a 24/7 basis and can be accessed and viewed by necessary employees at any time. Depending upon the size and scope of the storm, there can be hundreds of personnel assigned specifically to conduct air/land patrol damage assessments.

For Hurricane Nate, FPL did not utilize its two-stage damage assessment process discussed above, as the storm's impact on FPL's service territory was limited due to its location, size and intensity. Instead, FPL utilized trouble ticket data from its outage management system to assess damage and outage information. FPL was not impacted by Hurricane Maria.

Please see Attachment No. 1 for images of storm damage, documented during the damage assessment process.

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Hermine Storm Damage



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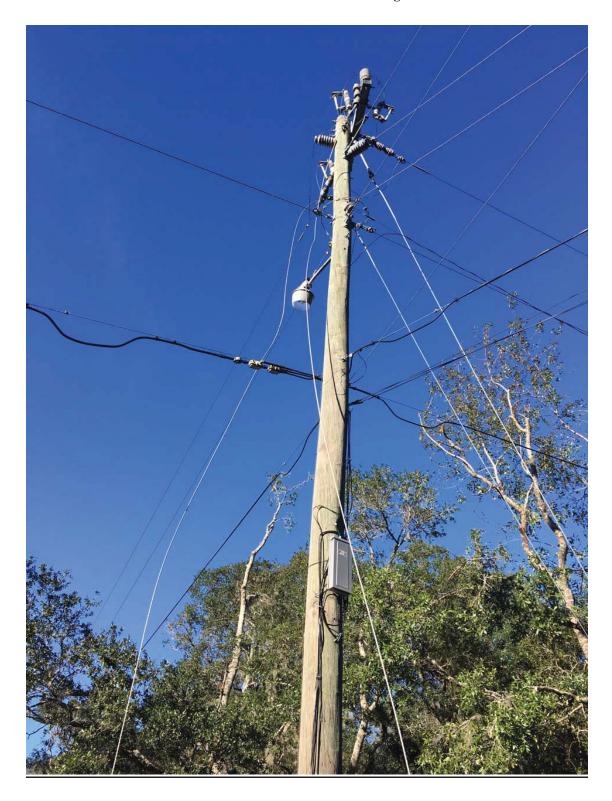


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Matthew Storm Damage



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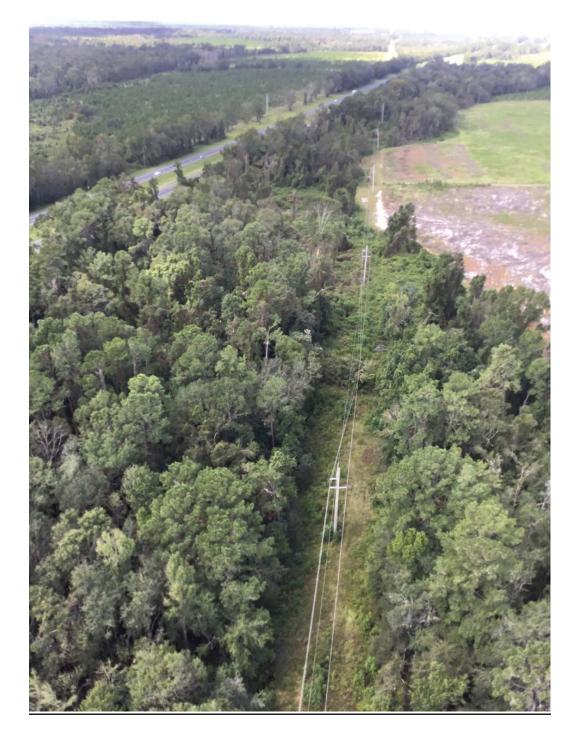


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Irma Damage



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QUESTION:

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

RESPONSE:

See FPL's response to Staff's First Data Request No. 4. Additionally, damage assessment information is disseminated in regularly scheduled business unit and corporate level meetings that occur pre-landfall and throughout the restoration process.

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QUESTION:

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

RESPONSE:

Restoration efforts commence immediately after FPL begins to experience storm-related outages, as smart grid equipment (e.g., automated feeder switches) and FPL's control centers reroute power to minimize/ avoid outages. Restoration crews, which have been pre-positioned based on the expected path of the storm and FPL's damage model assessment projection, begin restoration efforts as soon as the storm's effects clear the impacted area(i.e., winds subside below 35 mph), and it is safe to work. FPL uses outage ticket information and/or automated system information to identify those areas with the largest number of customers experiencing an outage to assist in the determination of when and where to focus restoration efforts. As the storm clears the area initially impacted, FPL/contractor resources follow the storm's impacts, using outage ticket and available damage assessment information, through the remaining affected FPL service area and begin to restore service in the same manner. This cycle continues until the storm is no longer impacting FPL's service territory.

FPL's restoration efforts are conducted in multiple locations and follow a well-coordinated, overall plan that calls for restoring power to the largest number of customers safely and as quickly as possible. This plan starts with repairing damage to FPL's power plants and power lines that carry electricity from FPL's generation plants to the local substations because, until this work is complete, the substations have no power to distribute out to customers. FPL also prioritizes the restoration of main distribution lines (feeders) that serve critical facilities, such as hospitals, police and fire stations, 911 centers and water treatment plants. As these critical community needs are restored, power will also come on for some homes and businesses served by the same facilities. Restoration is then focused on feeders serving other key community services such as major thoroughfares that host supermarkets, pharmacies and gas stations. Next, FPL focuses on the restoration of the remaining feeders, as they can restore service to thousands of customers when they are repaired/restored. Finally, FPL begins repairing and restoring laterals, transformers and services, facilities serving smaller groups and neighborhoods, converging on the hardest-hit areas until every customer's power is restored.

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QUESTION:

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

RESPONSE:

Incident Commanders at FPL's staging sites have overall responsibility for their respective staging site and nearby FPL service centers, including the overall management of crews (both internal and external). For Hurricanes Hermine, Matthew and Irma, see the table below. For Hurricane Nate, no staging sites were established, as FPL used its typical service center support to restore service. Hurricane Maria did not impact FPL's service territory.

	Personnel Responsible for Restoration Workload Assignments							
Storm	Title	Years of experience	Number of crews managed					
Hermine	Incident Commanders (5)	12+ years on average	Approximately 100 per IC					
Matthew	Incident Commanders (22)	12+ years on average	Approximately 180 per IC					
Irma	Incident Commander's (29)	12+ years on average	Approximately 230 per IC					

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QUESTION:

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

RESPONSE:

FPL's damage forecast model is used to develop the initial estimated restoration construction man-hours of workload associated with restoring service after a major storm. The restoration workload then increases or decreases, depending upon updated damage forecast model output, actual damage assessments, new trouble ticket work and completed restoration work.

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QUESTION:

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

RESPONSE:

The process for releasing mutual aid (as well as other restoration contractors) is the same for all major storm events. As restoration is being completed, assessments of remaining restoration construction man hours vs. available resources are evaluated. In general, once the available resources exceed the remaining restoration construction man hours, mutual aid resources (as well as other external contractor resources) are released. Other factors involved in releasing mutual aid resources include the mutual assistance provider's home need, distance from home, resource costs and the current location vs. future restoration location need.

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QUESTION:

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)
- b. Days of lodging provided for mutual aid partners (Person-Days)
- c. Number of meals provided for Utility personnel
- d. Number of meals provided for mutual aid partners
- e. Number of Utility personnel injuries
- f. Number of mutual aid partner injuries
- g. Number of Utility personnel fatalities
- h. Number of mutual aid partner fatalities

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

RESPONSE:

- a. Days of lodging provided for Utility personnel (Person-Days)
- b. Days of lodging provided for mutual aid partners (Person-Days)

FPL does not track lodging information separately for utility personnel or mutual aid partners. However, total counts of hotel/motel rooms and beds/cots from alternative housing (e.g., mobile sleeper trailers, tents other buildings) by day provided for utility personnel and mutual aid partners in total for Hurricanes Hermine, Matthew, Irma, Maria and Nate are as follows:

2016

Hurricane Hermine – Hotel/Motel Rooms

Aug. 30 – 210; Aug. 31 – 3,617; Sept. 1 – 1,898; Sept. 2 – 1,047; Sept. 3 – 263 Total 7,035

Hurricane Matthew - Hotel/Motel Rooms

Oct. 4 - 1,245; Oct. 5 - 16,109; Oct. 6 - 10,940; Oct. 7 - 16,616; Oct. 8 - 21,379; Oct. 9 - 22,638; Oct. 10 - 13,081; Oct. 11 - 10,718; Oct. 12 - 6,330; Oct. 13 - 3,627; Oct. 14 - 2,395; Oct. 15 - 1,111; Oct 16 - 133; Oct. 17 - 12; Oct. 18 - 7; Oct. 19 - 15; Oct. 20 - 8Total 126,364

<u>Hurricane Matthew – Beds/Cots</u> Oct. 8 thru Oct. 14 – 5,498 per day

<u>2017</u>

<u>Hurricane Irma</u> - At this time, the information for Hurricane Irma is not available as it is still being compiled/verified. FPL expects to have this information in January 2018.

<u>Hurricane Maria</u> – No lodging was provided since Hurricane Maria did not affect FPL's service territory.

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<u>Hurricane Nate</u> – No lodging was provided as Hurricane Nate restoration efforts were completed in one day with local restoration crews.

- c. Number of meals provided for Utility personnel
- d. Number of meals provided for mutual aid partners

FPL does not track meals separately for utility personnel or mutual aid partners. However, the count of meals provided to utility and mutual aid personnel in total for Hurricanes Hermine, Matthew, Irma, Maria and Nate are as follows:

Hermine: - 13,277 meals Matthew: 302,210 meals Irma: 1,000,803 meals

<u>Hurricane Maria</u> – No meals were provided since Hurricane Maria did not affect FPL's service territory.

<u>Hurricane Nate</u> – No meals were provided as Hurricane Nate restoration efforts were completed in one day with local restoration crews.

- NOTE: The above counts are for meals provided through the Logistics team and Aramark and do not include meals provided for service centers at the local level or on individual expense reports.
- e. Number of Utility personnel injuries

Employees: Irma: 10 OSHA recordable injuries Matthew: 6 OSHA recordable injuries

f. Number of mutual aid partner injuries

<u>Contractors:</u> Irma: 48 injuries referred off site for treatment Matthew: 6 injuries referred off site for treatment

NOTE: Injuries were not tracked specific to Hurricanes Hermine or Nate. Hurricane Maria did not impact FPL's service territory.

- g. Number of Utility personnel fatalities
- h. Number of mutual aid partner fatalities

There were no utility personnel or mutual aid personnel fatalities.

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QUESTION:

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

RESPONSE:

For storm events, when 99% of the customers impacted have been restored, FPL considers that restoration is "essentially complete". FPL uses 99%, since there are usually a relatively small number of customers with unique circumstances that prevent restoration from occurring (e.g., customers that are unable to take service due to damage to their homes). For Hurricanes Hermine, Matthew, Irma and Nate, restoration was essentially complete on September 2, 2016, October 11, 2016, September 19, 2017 and October 8, 2017, respectively. FPL was not impacted by Hurricane Maria.

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QUESTION:

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
- b. Peak number of outages

RESPONSE:

FPL cannot provide the peak number of outages by county, as this is not tracked by FPL. However, FPL does track total customers affected vs. total customer accounts by county, which is provided in subpart (a), and system peak number of outages which is provided in subpart (b) - see below. Hurricane Maria did not impact FPL's service territory.

a.											
Hurricane Nate Hurricane Irma		э	Hurricane Matthew			Hurricane Hermine					
County	Affected	Accts.	County	Affected	Accts.	County	Affected	Accts.	County	Affected	Accts.
Alachua	3	1,300	Alachua	1,300	1,300	Alachua	70	1,300	Alachua	610	1,300
Baker	3	5,400	Baker	5,400	5,400	Baker	5,350	5,400	Baker	1,450	5,400
Bradford	14	4,100	Bradford	4,100	4,100	Bradford	2,140	4,100	Bradford	2,330	4,100
Brevard	114	307,600	Brevard	307,600	307,600	Brevard	223,860	304,400	Brevard	8,900	303,700
Charlotte	329	114,100	Broward	794,560	933,300	Broward	23,670	926,200	Broward	3,810	924,300
Collier	606	210,700	Charlotte	114,100	114,100	Charlotte	470	112,500	Charlotte	1,450	112,300
Columbia	109	14,000	Clay	900	900	Clay	820	900	Clay	700	900
Flagler	5	58,000	Collier	210,700	210,700	Collier	720	207,500	Collier	5,790	206,900
Glades	3	3,400	Columbia	14,000	14,000	Columbia	660	13,900	Columbia	6,630	13,900
Hendry	1	9,700	De Soto	16,600	16,600	De Soto	10	16,500	De Soto	180	16,400
Indian River	4	56,300	Duval	10	10	Duval	10	10	Duval	10	10
Lee	599	259,900	Flagler	58,000	58,000	Flagler	56,260	59,100	Flagler	3,620	56,900
Martin	25	93,400	Glades	2,540	3,400	Glades	170	3,300	Hardee	10	40
Nassau	3,406	21,800	Hardee	30	40	Hendry	10	9,400	Hendry	40	9,400
Okeechobee	27	20,000	Hendry	9,700	9,700	Highlands	40	600	Indian River	1,270	55,300
Palm Beach	380	739,000	Highlands	420	600	Indian River	45,930	55,400	Lee	7,260	254,300
Putnam	22	20,100	Indian River	52,670	56,300	Lee	5,530	255,300	Manatee	12,920	181,200
Sarasota	3	263,800	Lee	259,900	259,900	Manatee	2,840	181,700	Martin	420	92,600
Seminole	41	54,400	Manatee	132,710	184,900	Martin	62,570	92,700	Miami-Dade	8,580	1,095,900
St Johns	43	86,800	Martin	87,780	93,400	Miami-Dade	27,060	1,099,100	Nassau	8,120	20,800
St Lucie	262	126,200	Miami-Dade	1,020,255	1,114,000	Monroe	20	90	Okeechobee	1,930	19,800
Suwannee	252	5,100	Monroe	90	90	Nassau	21,060	21,100	Palm Beach	3,500	730,800
Volusia	61	176,800	Nassau	21,800	21,800	Okeechobee	2,340	19,800	Putnam	320	20,000
			Okeechobee	19,450	20,000	Orange	10	10	Sarasota	20,480	259,200
			Orange	1	1	Osceola	5	10	Seminole	110	53,700
			Osceola	4	4	Palm Beach	100,430	732,300	St Johns	3,240	83,800
			Palm Beach	680,790	739,000	Putnam	19,560	20,000	St Lucie	890	124,100
			Putnam	20,100	20,100	Sarasota	5,060	259,900	Suwannee	3,600	5,000
			Sarasota	218,840	263,800	Seminole	51,805	53,800	Union	530	1,700
			Seminole	54,400	54,400	St Johns	84,210	84,300	Volusia	4,080	175,400
			St Johns	84,950	86,800	St Lucie	59,240	124,400			
			St Lucie	107,540	126,200	Suwannee	1,310	5,000			
			Suwannee	4,550	5,100	Union	10	1,700			
			Union	1,080	1,700	Volusia	177,810	178,400			
			Volusia	147,740	176,800						

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b. Peak Customer Outages

	0
<u>Storm</u>	<u>Outages</u>
Irma	3,663,348
Matthew	699,586
Hermine	10,631
Nate	3,984

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QUESTION:

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

RESPONSE:

For Hurricanes Hermine, Matthew and Irma, the call center customer service representatives were utilized as noted below:

- Before the storm impacts our service territory, the call center customer service representative (CSR) is being utilized for normal operations. In preparation for the storm, a group of non-CSR employees identified as contingency representatives are provided refresher training to enable them to support post land fall restoration efforts as CSRs.
- During the storm, a team of CSRs will "ride the storm" which allows them to handle outage related calls in real time as the storm passes through FPL's territory. The storm rider CSRs are primarily located at our call center partner in El Paso, Texas (GCS). GCS ramps up their staffing of storm riders during a storm impacting FPL's service territory since they are outside of harm's way. Florida based storm rider CSRs may be staffed at the Miami or West Palm Beach call centers or as home-based agents. The number and location of Florida based storm riders depends on the path and intensity of the storm.
- After the storm has exited FPL's territory, the CSRs' primary responsibility is to handle storm related calls. When the county-wide all clear is provided and it is safe for CSRs to return to work to resume their duties, FPL CSRs will report to work for 12 hour shifts. FPL's call center partner, GCS may increase their staffing and FPL contingency representatives may be activated depending on the magnitude of the storm. The call center operations team develops CSR schedules to best meet the projected call volume arrival rate. Additional third party resources are engaged, if needed. Our primary focus is to manage restoration related calls. Therefore, regular business may be deferred until FPL starts transitioning back to normal business. At that time, contingency representatives are released from storm roles and third party assistance is discontinued.

For Hurricanes Nate and Maria, call center customer service representatives followed normal non-storm processes.

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QUESTION:

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?

RESPONSE:

14 and 14a:

The tables below provide the total number of regular customer service representatives (CSRs) and additional personnel responding to customer contacts for Hurricane Hermine, Matthew and Irma.

Regular Staffing CSRs	Hermine	Matthew	Irma
FPL Call Center	228	267	320
GCS Call Center	227	232	228
Back Office	-	-	16
FPSC Representatives	-	6	6
Total Number of CSRs	455	505	570

Additional Personnel (CSRs)	Hermine	Matthew	Irma
FPL Call Center	-	66	161
GCS Call Center	-	-	75
Mutual Assistance Call Center	-	-	22
Community Action Team	0	16	26
Area Information Managers	14	82	96
Total Number of Additional Personnel	14	164	380
	<u>.</u>		
Total CSRs	469	669	950

In addition to the customer service representative support noted above, there are additional employees who were performing their normal responsibilities and addressed customer contacts. These include, but are not limited to, Customer Advisors and External Affairs employees.

For Hurricanes Nate and Maria, call center customer service representatives followed normal non-storm processes. No additional resources were added.

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QUESTION:

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

RESPONSE:

The number of customer contacts received by the customer call center(s) during Hurricane Hermine, Matthew, and Irma are provided below.

	Storm/Outage Contacts – Customer Call Centers								
Storm	CSR Handled	Interactive Voice Response System (IVR)	High Volume Call Answering System (HVCA)	Total					
Hermine	22,303	24,029	0	46,332					
Matthew	184,297	206,256	64,365	454,918					
Irma	331,481	260,148	1,217,909	1,809,538					
Nate	1,907	1,677	0	3,584					

Additional Storm/Outage Contacts *								
Storm	Mobile Application**	FPL.com	FPL Facebook and Twitter Pages***	Total				
Hermine	0	79,221	999	80,220				
Matthew	0	2,729,103	20,877	2,749,980				
Irma	2,549,479	4,465,819	123,569	7,138,867				

* Additional Storm/Outage Contacts were not recorded for Hurricane Nate.

**Mobile application was implemented in 2017

***These social media figures account for all inbound messages received to FPL's FPL Connect Facebook page and @InsideFPL Twitter page. Inbound messages include: Facebook comments, private messages, replies, shares and posts; Twitter mentions, direct messages, retweets and replies. In addition to storm-related customer inquiries, inbound messages also include general commentary from customers and non-customers, non-storm customer inquiries and media activity.

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QUESTION:

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.

RESPONSE:

The methods utilized to submit and collect customer contacts before, during and after a storm are noted below. For Hurricanes Nate and Maria, call center customer service representatives followed normal non-storm processes.

Hurricane Hermine			
Method	Before	During	After
Call Center CSR	\checkmark	\checkmark	\checkmark
Interactive Voice Response System	\checkmark	\checkmark	\checkmark
High Volume Call Answering System	\checkmark	\checkmark	\checkmark
Florida Public Service Commission Warm Transfers	\checkmark	\checkmark	\checkmark
Internal Referrals	\checkmark	\checkmark	\checkmark
Better Business Bureau	\checkmark	\checkmark	\checkmark
Community Action Team	N/A	N/A	N/A
Area Information Managers	\checkmark	\checkmark	\checkmark
Non-Call Center Direct Contact (phone, email)	✓	\checkmark	\checkmark
FPL.com	✓	\checkmark	\checkmark
Mobile application	N/A	N/A	N/A
Social media	\checkmark	\checkmark	\checkmark

Hurricane Matthew			
Method	Before	During	After
Call Center CSR	\checkmark	\checkmark	\checkmark
Interactive Voice Response System	\checkmark	\checkmark	\checkmark
High Volume Call Answering System	\checkmark	\checkmark	\checkmark
Florida Public Service Commission Warm Transfers	\checkmark	\checkmark	\checkmark
Internal Referrals	\checkmark	\checkmark	\checkmark
Better Business Bureau	\checkmark	\checkmark	\checkmark
Community Action Team	N/A	N/A	\checkmark
Area Information Managers	✓	✓	✓
Non-Call Center Direct Contact (phone, email)	✓	\checkmark	✓
FPL.com	✓	✓	✓
Mobile application	N/A	N/A	N/A
Social media	\checkmark	\checkmark	\checkmark

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Hurricane Irma			
Method	Before	During	After
Call Center CSR	\checkmark	\checkmark	\checkmark
Interactive Voice Response System	✓	\checkmark	\checkmark
High Volume Call Answering System	✓	\checkmark	\checkmark
Florida Public Service Commission Warm Transfers	✓	\checkmark	\checkmark
Internal Referrals	✓	\checkmark	\checkmark
Better Business Bureau	✓	✓	\checkmark
Community Action Team	N/A	N/A	\checkmark
Area Information Managers	✓	✓	\checkmark
Non-Call Center Direct Contact (phone, email)	✓	✓	\checkmark
FPL.com	\checkmark	\checkmark	\checkmark
Mobile application	✓	✓	\checkmark
Social media	\checkmark	\checkmark	\checkmark

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QUESTION:

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.

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.

RESPONSE:

Customer Service Representative (CSR)

The processes for addressing customer contacts with CSRs are the same for each storm except for the Community Action Team which was implemented during Hurricane Matthew. In addition, the process for a customer to report an outage across all channels are the same before, during and after a storm and are outlined below:

Call Center CSR:

- Customer provides/inputs information required to bring up premise/account that is experiencing power outage (e.g. account number, phone number, address, etc.)
- If FPL's outage management system has identified an outage on the account then the customer is asked to verify their contact (phone) information, and the existing ticket information (including restoration time if available) is provided.
- Before a storm, if there is not an existing outage reported and the account has a smart meter, we attempt to remotely contact the smart meter to confirm if there is power. During a storm and after a storm this step may not be available depending on the magnitude of the storm.
 - If the outage is confirmed, an outage ticket is generated and, if available, a predictive restoration estimate will be provided.
 - If the outage is not confirmed by the meter (or we are not able to communicate with the smart meter), then the steps for a non-standard meter option are followed.
- If there is not an existing outage reported and it is a non-standard meter on the account, then we ask the customer to try and reset their main and circuit breakers and to confirm if the neighbors are also without power.
 - If the breaker reset does not resolve the outage or cannot be performed, the customer can continue with reporting their outage and creating a trouble ticket. If known, we will also provide a predictive restoration estimate.

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- For all outages reported to an agent, if there is special/specific messaging available for that customer (either assigned to all customers or area specific based on distribution feeder, zip code, area code or service territory) then the additional messaging will be provided to the customer as well.
 - The IVR and web channel could also potentially provide a limited amount (less robust than agent channel) of special/specific messaging.

IVR:

• Same as Call Center CSR

HVCA:

• The HVCA process is similar to CSR process except it does not attempt to communicate remotely with the meter or request the customer to check the breakers. An outage ticket is generated or confirmed (if existing) and a restoration update is provided (if available.)

Florida Public Service Commission Warm Transfers:

• A Customer Advocacy Representative will speak with the customer and follow the same process as a Call Center CSR.

Internal Referrals:

• A Customer Advocacy Representative will speak with the customer and follow the same process as a Call Center CSR.

Better Business Bureau:

• A Customer Advocacy Representative will speak with the customer and follow the same process as a Call Center CSR.

Community Action Team:

• Teams are only deployed post storm to the hardest hit areas to provide customer service support to the community. Tents are set up in neighborhoods and staffed with customer service representatives to assist customers with reporting outages, providing restoration updates, providing information on local resources (e.g., Red Cross, FEMA), and providing assistance such as cell phone charging stations, WIFI and water.

Area Information Managers (AIM):

• Before the storm, for assigned customers, every effort is made by the Customer Advisors to ensure the correct contact information is updated in FPL's Customer Information System. In addition, during FPL's annual Storm Dry Run (emergency preparedness drill), which is conducted prior to the hurricane season, the AIM organization makes contact with the Top Critical Infrastructure Functions (CIF) and public schools that are located in their storm work base area.

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• After the storm and once the restoration effort is under way, AIM Teams are deployed to restoration areas and staging sites to monitor and provide restoration status reports regarding CIF customers, as well as to coordinate the investigation, resolution and reporting for Requests for Information and Requests for Action. The teams also maintain ongoing communication support with FPL's Command Center, Regional External Affairs managers and EOC representatives related to restoration activities and progress. AIM Teams also contact Top CIF customers and public schools by phone or via site visits to confirm the status of electrical service which is then documented in the Outage Communication System (OCS), depending on the phase of the restoration process.

Social Media:

1.

The processes for addressing customer contacts through social media before a storm and during a storm are similar, except during a storm regular business (step 5) is deferred. During Irma, a message was posted to the top of FPL's Facebook and Twitter feeds notifying customers that we would be not be responding one-to-one to customer questions immediately following the event.

The process before the storm is outlined below:

- 1. We post a general message;
- 2. Customers may respond to the general message in Twitter and Facebook;
- 3. We monitor and analyze the responses; and
- 4. We respond using a one-to-many approach to answer the most common storm-related questions and concerns.
- 5. We continue to respond to customer concerns related to regular business on one-to-one basis.

The process for addressing customer contacts for social media, after a storm, is outlined below:

- Initial days after the storm, when social volume is at extremely high levels:
 - a. We post general messages (primarily safety and restoration process);
 - b. Customers may respond to general messages in Twitter and Facebook;
 - c. We monitor and analyze the responses; and
 - d. We respond using a one-to-many approach to answer the most common questions and concerns.
- 2. As volume becomes manageable (varies by storm):
 - a. We continue with our one-to-many approach
 - i. We continue to post general messages (safety, restoration process and progress);
 - ii. Customers may respond to general messages in Twitter and Facebook;
 - iii. We monitor and analyze the responses;
 - iv. We respond using a one-to-many approach to answer the most common questions and concerns.

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b. We engage with customers one on one using replies, comments, and direct messages on Facebook and Twitter. This activity is conducted by an integrated team of Marketing & Communication and Care Center members.

FPL.com and Mobile Application:

Before, during and after a storm, customers who interact with FPL on FPL.com and our mobile application receive automated information regarding outage status provided by back-end systems. The customer interacts in the following ways:

- 1. PowerTracker
- 2. Outage Reporting
- 3. Storm Center
- 4. Government Portal (local leader access only)
- 5. Other standard on-line account transactions that remain active during an event.
- 17a. There were no restoration delays for Hurricanes Hermine, Matthew, Irma, Maria, and Nate resulting from the processes of addressing customer contacts.

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QUESTION:

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?

RESPONSE:

- Customer contacts, through all channels, are categorized through the generation of a touchpoint. The touchpoint categorizes the contact by the type of outage being reported (i.e. specific process), specific concern, and communication channel. The majority of these touchpoints are system generated as a result of a transaction being tracked in the system. The categories that are specific to the outage reporting process are:
 - Trouble call, outage reported, No Current, call rollover to High Volume Call Answering System (HVAC)
 - Trouble call, outage reported, Partial No Current, call rollover to HVAC
 - Customer Reported All Power Out-FPL Interactive Voice Response System (IVR)
 - o Customer Reported Some Power Out-FPL IVR
 - o Power Equipment And Reliability Liaison (PEARL)- All Power Out flow
 - PEARL No loss of service report
 - PEARL Some power out flow
 - Web Outage Reporting Systems Web outage report
 - WOST Web outage status check
- Customer contacts associated with Internal Referrals, Better Business Bureau, and Florida Public Service Commission Warm Transfers are further categorized by major and sub-categories.

Lighting Line Clearance Meter Reading New Service Order Processing Other Payments Physical Facilities Prior Indebtedness Revenue Protection Service Charges Service Interruptions Telemarketing Transmission/Substation
e

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- Customer contacts associated with Community Action Teams are further categorized based on the assessment of the customer during the interaction. The categories used are complimentary, understanding, frustrated, rude, or unrelated. If the customer requested the concerned be elevated, a Request for Action (RFA) is reported.
- Customer contacts associated with Area Information Managers (AIM) are further categorized as "power on" or "power off". In addition, AIMs categorize customer contacts as Requests for Information (RFI) or RFA.
- Any Request for Action (RFA) or Request for Information (RFI) from External Response Team (ERT) members would be captured and entered through the Critical Information Team (CIT) process and would be further categorized by the following CIT entry fields:
 - o CIF
 - Crew Information
 - Customer Counts
 - o Debris Removal
 - o Equipment
 - o ETR/Outage Info
 - o FPL Interview
 - o General Info (Data Request)
 - o Maps
 - o Media
 - Photo Op Request
 - Police/Fire Priority 1
 - o Resources
 - Special Priority Request
 - o Street Lights
 - o Other
 - o Smart Meter Bulk Ping
 - o Shelter
 - During a storm activation, all inbound social media messages on FPL's Facebook and Twitter channels are categorized as follows:

Level of response required

- Tier 1 No response, monitor only
- Tier 2 Personalize and use pre-approved standard messages
- Tier 3 Customized or escalated response, move to private channels
- Tier 4 New response needed; no standardized response available

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Theme* (Applied to Tiers 2 – 4 only)

- Agent
- Communications
- Crew
- Customer
- Financial
- Power
- Line Clearing
- Safety
- Special Needs
- System Issue
- Threat
- Other VOC
- FPL Community Presence

*During Irma, themes were only applied to inbound messages from Sept. 11 – Sept. 22; Themes were not applied to inbound messages during Hermine and Matthew.

Notes:

• In addition to storm-related customer inquiries/messages, the inbound message count also includes general commentary from non-customers, non-storm-related customer inquiries and media activity.

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QUESTION:

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?

RESPONSE:

Customer facing employees are provided approved messaging prepared by the Emergency Communication Team at FPL's Command Center. This ensures that we provide customers with timely and consistent information across all contact channels. Messaging can be for all outages or for specific areas based on feeder number, zip code, service territory district boundaries (similar to county boundaries), or area codes associated to a customer's account. The restoration information is updated in the customer information system as well as communicated to employees through internal communications, process updates, daily stand-up meetings, restoration calls and training sessions (as needed.)

a. For Call Center, Customer Service Representatives' scripts are developed from key messages provided by the Emergency Communication Team (ECT) at our Command Center. This ensures that we provide customers with timely and consistent information across all contact channels. The Community Action Team and Area Information Managers use the same messaging provided by the Emergency Communication Team, which is issued to them in a talking point document daily.

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QUESTION:

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.

RESPONSE:

- a. Initial estimated times of restoration (ETR) are developed using infrastructure damage forecasts developed from FPL's damage assessment model, trouble ticket data, initial damage assessment data along with estimated available resources (internal and external).
- b. Customers and the public are notified through various customer communication channels, including social media, geo-targeted media (e.g., radio, TV, newspaper, etc.), inbound and outbound calls, FPL.com, and the FPL app.
- c. Estimated restoration times are continually being updated as new damage assessment, trouble ticket and work completed information becomes available.
- d. Estimated restoration times are disseminated internally by our ETR coordination team through various systems (e.g., FPL's outage communication system), emails and conference calls. As estimated times of restoration are developed/updated, FPL's communications team provides updates to the county and state EOCs. See FPL's response to subpart (b) above for how FPL disseminates this information to the public.

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QUESTION:

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
- b. Whether or not fuel shortage was an issue during these events
- c. Whether or not there were any delays due to fuel shortage
- d. Whether or not there were enough vehicles available during these events/any issues mobilizing crews

RESPONSE:

Depending on the scale/impacts of the storm, vehicle fuel is procured for FPL utility personnel, mutual aid partners (if involved) and contractors (after they are on-boarded with FPL) from FPL-owned supplies, vendor-owned supplies, purchased from terminal suppliers and from retail locations.

- a. FPL does maintain fuel storage for emergency restoration events. During storm season, FPL typically maintains a leased/owned fuel inventory (diesel and unleaded fuel) in excess of 3 million gallons, the vast majority of which is FPL-owned.
- b. During Hurricane Irma, some contractors traveling into the state had difficulty finding retail stations from which to refuel. Supply was limited due to high demand and ports and fuel terminals being closed as a result of the storm. Once contractors arrived and were on-boarded, there were no additional fuel shortage issues. FPL had no such issues with the other three storms (Hermine, Matthew and Nate) that impacted its service territory.
- c. Overall storm restoration periods were not extended as a result fuel shortages.
- d. As a result of the Hurricane Harvey restoration efforts in Texas and Louisiana, obtaining fueling equipment was a challenge just prior to Hurricane Irma making landfall. However, fueling equipment soon become available and was sufficient during the restoration effort.

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QUESTION:

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

RESPONSE:

There were no complications or delays related to shortages or delayed delivery of materials for Hurricanes Hermine, Matthew, Irma or Nate. FPL's service territory was not impacted by Hurricane Maria.

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QUESTION:

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.

RESPONSE:

See the table below:

	Nate	Irma	Matthew	Hermine
Storm Preparations Begin	10/6/2017	9/5/2017	10/2/2016	8/24/2016
Command Center Activated	N/A	9/5/2017	10/3/2016	8/25/2016
External Resources Acquisition Initiated	N/A	9/5/2017	10/4/2016	8/25/2016
Staging Initiated	N/A	9/8/2017	10/5/2016	8/31/2016
Storm Impacts Begin (Weather)	10/8/2017	9/9/2017	10/6/2016	8/31/2016
Storm Impacts End (Weather)	10/8/2017	9/11/2017	10/8/2016	9/3/2016
Restoration Resources Initially Deployed	10/8/2017	9/11/2017	10/6/2016	9/2/2016
First Mutual Assistance Released	N/A	9/17/2017	10/8/2016	8/26/2016
All Mutual Assistance Released	N/A	9/24/2017	10/14/2016	8/26/2016
Customers Essentially Restored	10/8/2017	9/19/2017	10/11/2016	9/2/2016

N/A - Not Applicable; Hurricane Maria did not impact FPL's service territory.

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QUESTION:

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.

RESPONSE:

FPL validates adherence and departures from its storm preparation plan during its annual training cycle. Following training exercises, FPL conducts after-action reviews or lessons learned to determine what went well and, more importantly, what can be improved. As part of our annual training cycle, the importance of remaining process disciplined is emphasized. Any variations from process are treated as exceptions and documented for subsequent review and follow-up. No departures from our preparation plans have been identified; however, we have added to our processes, based on best practices implemented during a restoration event that were determined to be sustainable.

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QUESTION:

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.

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.

RESPONSE:

Following storm restoration drills and exercises and severe weather events impacting FPL's service territory, FPL conducts after-action reviews or lessons learned to assess what went well and, more importantly, what can be improved. As part of our annual training cycle, as well as when we are in the midst of restoration efforts, the importance of remaining process disciplined is emphasized. Any variations from process are treated as exceptions and documented for subsequent review and follow-up. No departures from our restoration plans have been identified; however, modifications to processes, based on lessons learned or best practices are implemented if they are determined to be sustainable.

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QUESTION:

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.

RESPONSE:

Please see FPL's response to Staff's First Data Request No. 12. To date, FPL has not developed this information at the FPL management area level.

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QUESTION:

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							
CountyMaximum Sustained Winds (MPH)Maximum Gusts (MPH)Maximum Gusts Rainfall (inches)Maximum Stor Surge (Feet)								

RESPONSE:

For the information requested for Hurricanes Hermine, Matthew and Irma, see the table below. No information is being provided for Hurricanes Maria (did not impact FPL's service territory) and Nate (its impacts on FPL's service territory were limited and there does not appear to be any sustained tropical storm force winds that occurred in FPL's service territory). Also, the information for the 2017 hurricanes (Irma, Maria and Nate) are considered preliminary since the National Hurricane Center's final reports for these storms have not yet been issued.

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	Max. S	ustained Wi (MPH)	nds	Maxim	um Wind Gu (MPH)	ists	Ra	ainfall (Inches)	I	Storr	n Surge (Fee	:t)
County	Hermine	Matthew	Irma	Hermine	Matthew	Irma	Hermine	Matthew	Irma	Hermine	Matthew	Irma
Alachua	34	31	64	52	48	99	4.85	1.49	12.4			
Baker	32	30	65	50	46	100			9.76			
Bradford	32	32	62	50	49	96			11.74			
Brevard	26	80	75	39	121	114		17.01	11.84			
Broward	19	39	83	29	60	127		1.61	9.72			2.7
Charlotte	30	26	70	45	39	104	4.47		6 to 10			
Clay	39	44	73	60	68	112			11.32			
Collier	25	26	95	38	40	144			10.55			6.5
Columbia	34	26	62	52	40	95			8.44			
De Soto	24	20	66	36	30	100						
Duval	41	59	89	61	88	136	2.53	8.91	11.11			
Flagler	34	68	64	51	102	97			8.48			4.19
Glades	20	30	71	30	45	106			6.6			
Hardee	24	23	74	36	34	111						
Hendry	21	30	70	31	42	102			10.31			
Highlands	21	29	68	31	43	103						
Indian River	21	64	75	32	97	116		3.55	10.61			
Lee	29	26	72	43	40	110	1.49					
Manatee	38	30	80	57	45	122	10.00					
Martin	21	61	79	32	92	119		4.18	10.53			
Miami-Dade	21	31	85	32	48	127			3 to 8			6
Monroe	29	30	104	44	46	159						
Nassau	37	45	89	57	68	135			12.7			3.6
Okeechobee	20	34	72	29	50	107						
Orange	25	48	71	37	73	110		6.17	11.58			
Osceola	22	45	70	34	69	108			10.61			
Palm Beach	21	49	85	32	75	127			10.35			2.7
Putnam	36	48	59	55	74	91						3.6
Sarasota	35	29	72	53	43	108	10.71		3 to 8			
Seminole	24	47	66	37	72	101			11.74			
St Johns	39	73	79	60	109	121		8.81	10.22		8.39	5.61
St Lucie	21	66	84	32	99	127			21.66			
Suwannee	41	24	58	62	37	88						
Union	32	29	62	48	45	95						
Volusia	32	72	78	49	109	116		5.06	11.82			

Notes: Wind data sources are WeatherFlow, Climate Forecast Applications Network (CFAN), NOAA URMA and GFS products and ECMWF products; all wind data is at the standard measuring height of 10 meters; wind gusts inside tornadoes and other mesoscale features

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associated with tropical cyclones may have been greater than indicated in the provided data; storm surge data source is NOAA Post Tropical Cyclone Reports; rainfall data source is from NOAA Post Tropical Cyclone Reports; rainfall totals are provided primarily only for the counties with larger rainfall amounts.

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QUESTION:

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.

RESPONSE:

As FPL does not have the requested information in a map or graphic, it is providing the number of feeders hardened (per Rule 25-6.0342 and through FPL's priority feeder program) per county in the table below.

As of 12/31/16				
County	Number of Hardened Feeders			
Baker	4			
Bradford	1			
Brevard	60			
Broward	159			
Charlotte	14			
Clay	1			
Collier	12			
Columbia	5			
De Soto	4			
Flagler	9			
Hendry	3			
Indian River	6			
Lee	33			
Manatee	22			
Martin	16			
Miami-Dade	154			
Nassau	3			
Okeechobee	4			
Palm Beach	109			
Putnam	9			
Sarasota	34			
Seminole	13			
St Johns	18			
St Lucie	18			
Suwannee	3			
Union	1			
Volusia	45			
Total	760			

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QUESTION:

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

RESPONSE:

FPL does not maintain its accounting records at the level of detail required to provide the requested information as they do not differentiate hardened facilities from non-hardened facilities, nor do they track which assets were repaired. However, FPL does track certain assets, at the total system level, that were requested and replaced during each hurricane as reflected in the tables below. Note, FPL did not track storm repairs/replacements for Hurricanes Maria and Nate as Hurricane Maria did not impact FPL's service territory and Nate had limited impact. Also, the Hurricane Matthew capital associated with follow-up work and all of the Hurricane Irma capital (during storm and follow-up work) details are not yet available by plant account as these costs have not yet been unitized from account 106 to account 101 by plant account.

Hurricane Matthew	Number of Facilities Requiring	
	Repair	Replacement
Transmission		
Structures	N/A	0
Substations	N/A	0
Total	N/A	0
Distribution		
Poles	N/A	656
Substation	N/A	0
Feeder OH	N/A	0
Feeder UG	N/A	0
Feeder Combined	N/A	0
Lateral OH	N/A	N/A
Lateral UG	N/A	N/A
Lateral Combined	N/A	N/A
Total	N/A	N/A
Service		
Service OH	N/A	N/A
Service UG	N/A	N/A
Service Combined	N/A	N/A
Total	N/A	N/A

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Hurricane Hermine	Number of Facilities Requiring		
	Repair	Replacement	
Transmission			
Structures	N/A	0	
Substations	N/A	0	
Total	N/A	0	
Distribution			
Poles	N/A	19	
Substation	N/A	0	
Feeder OH	N/A	0	
Feeder UG	N/A	0	
Feeder Combined	N/A	0	
Lateral OH	N/A	N/A	
Lateral UG	N/A	N/A	
Lateral Combined	N/A	N/A	
Total	N/A	N/A	
Service			
Service OH	N/A	N/A	
Service UG	N/A	N/A	
Service Combined	N/A	N/A	
Total	N/A	N/A	

Notes:

N/A – Information is not available at this level of detail in FPL's accounting records.

For substations and feeders, FPL has stated 0 since no entire substation or feeder was replaced. However, these facilities consist of many pieces of equipment (e.g., wire, cable, breakers, transformers, cross arms and arrestors) some of which may have been replaced.

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QUESTION:

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.

RESPONSE:

Please see FPL's response to Staff's First Set of Data Requests No. 29.

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QUESTION:

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.

RESPONSE:

Below are the top five outage causes for all ticket types (e.g., feeder, lateral, transformer, etc.) for each storm, as recorded in FPL's outage management system:

Hurricane Hermine – Vegetation; Other Weather; Equipment Failure; Unknown; Other Hurricane Matthew – Other Weather; Vegetation; Other; Equipment Failure; Unknown Hurricane Irma – Other Weather; Vegetation; Equipment Failure; Other; Unknown Hurricane Maria – N/A (did not impact FPL's service territory) Hurricane Nate – Equipment Failure; Vegetation; Unknown; Animals; Other

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QUESTION:

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

RESPONSE:

While the requested information is not specifically tracked by FPL, for Hurricanes Matthew and Irma, vegetation issues (e.g., clearing the roads, clearing fallen limbs/trees, replacing broken poles due to fallen limbs/trees), flooding due to excessive rain and/or storm surge and the storms' paths and associated system-wide impacts adversely affected the pace of restoration. Additionally, Hurricane Matthew's path resulted in limited hotel accommodations along the east coast, which caused crews to be lodged in areas further inland. This caused lengthier than desired drive times which impacted crew productivity. Notwithstanding the challenges posed by these issues, customer restoration for Hurricane Matthew and Hurricane Irma was essentially complete in four days and ten days, respectively.

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QUESTION:

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

RESPONSE:

For Hurricanes Matthew and Irma, flood monitoring alarms provided early detection of flood waters inside the St. Augustine Substation. As a result of the alarms, the substation was deenergized remotely from the control center, preventing significant damage, which can occur if the station is flooded while energized. Also, flood doors installed on the St. Augustine relay vault protected the critical electronic control equipment inside the building from flood waters. For Hurricane Irma, the flood monitoring alarms at the South Daytona Substation also provided early detection of flood waters and, as a result, it too was de-energized to avoid significant damage. Substation flooding was not an issue for Hurricanes Hermine, Maria and Nate.

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QUESTION:

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.

RESPONSE:

For the hurricanes requested, in total, there were nearly 700,000 outages avoided due to automated feeder switches – approximately 118,000 for Hurricane Matthew, 33,000 for Hurricane Hermine and 546,000 for Hurricane Irma. For Hurricane Nate, this information was not tracked. Hurricane Maria did not impact FPL's service territory.

FPL's control centers verify the customers interrupted (CI) on each feeder outage ticket by performing a trace on the specific feeder section that experienced an interruption (i.e., an outage that lasted for at least one minute). If an automated feeder switch (AFS) operated on a feeder experiencing an interruption, the CI for each such feeder ticket was reduced to reflect only those customers that actually experienced an interruption. Once all feeders were verified, the CI avoided was summarized.

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QUESTION:

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.

	Hurricane (Name) – CIF						
CIF Name/Type (i.e. Hospital)	County/ Location	RestorationOutageTimeCause		Number of H	Facilities Requiring		
					Repair	Replace	
				Transmission			
				Structures			
				Substations			
				Total			
				Distribution			
				Poles			
				Substation			
				Feeder OH			
				Feeder UG			
				Feeder Combined			
				Lateral OH			
				Lateral UG			
				Lateral Combined			
				Total			
				Service			
				Service OH			
				Service UG			
				Service Combined			
				Total			

RESPONSE:

Included within FPL's storm hardening filings, including its most recent Petition for Approval of Storm Hardening Plan (Docket No. 20160061-EI) and its Annual Reliability Filing to the Florida Public Service Commission dated March 1, 2017, FPL addresses system hardening of feeders serving critical infrastructure such as hospitals, 911 centers and police/fire stations. Below is the requested information for hardened feeders serving these critical infrastructure facilities that experienced an outage during Hurricanes Hermine, Matthew and Irma. There were no hardened feeders serving CIFs that experienced an outage as result of Hurricane Nate. Also, Hurricane Maria did not impact FPL's service territory. See FPL's response to Staff's First Data Request No. 29 for repair/replacement of hardened facilities. The outage duration provided for each CIF feeder is an average duration (i.e., total customer minutes interrupted / total number of customer interruptions) for the entire feeder. FPL notes that, as a result of smart grid technology (e.g., automated feeder switches) and other sectionalizing devices, additional protection against service interruptions can be provided for CIF customers, even beyond the hardening of CIF feeders.

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Therefore, not all CIF customers on a CIF feeder may have actually experienced a service interruption during an outage of their feeder or, if they did, their outage duration could have been less than the feeder's average outage duration.

Hurricane Hermine

Location / Management Region	Feeder Number	Primary CIF Facility Served*	Outage Cause	Feeder Outage Duration (minutes)
Central Florida	102361	Sewage Treatment	Vehicle	41
North Florida	301132	Hospital	Storm	194
North Florida	301138	Hospital	Vegetation	266
North Florida	300631	Fire	Storm	448
North Florida	300634	Special Needs Shelter	Storm	203
West Dade	807035	Fire	Storm	3
Manasota	500933	911	Vegetation	78

Hurricane Matthew

Location / Management Region	Feeder Number	Primary CIF Facility Served*	Outage Cause	Feeder Outage Duration (Minutes)
Boca Raton	402835	911	Storm	8
Boca Raton	409862	Hospital	Storm	17
Boca Raton	407931	911	Storm	1508
West Palm Beach	408664	EOC	Storm	471
Brevard	200431	Hospital	Storm	714
Brevard	200432	911	Storm	711
Brevard	200734	Hospital	Storm	1380
Brevard	203032	Gas Supply	Storm	2200
Brevard	201637	Sewage Treatment	Storm	621
Brevard	205631	Fire	Storm	513
Central Florida	204061	Sewage Treatment	Storm	1080
Central Florida	205363	911	Vegetation	769
Central Florida	101037	Media Center	Storm	3006
Central Florida	100838	Police	Storm	2310

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Central Florida	100837	Sewage Treatment	Vegetation	3480
Central Florida	106063	Water Treatment	Storm	1809
Central Florida	204636	911	Vegetation	986
Central Florida	102361	Sewage Treatment	Storm	3292
Central Florida	102366	Water Treatment	Storm	1716
Central Florida	111132	Sewage Treatment	Vegetation	1242
Central Florida	105062	Sewage Treatment	Storm	1158
Central Florida	102031	Sewage Treatment	Storm	2269
Central Florida	101541	Hospital	Vegetation	1914
North Florida	106236	Water Treatment	Vegetation	1041
North Florida	106232	Hospital	Vegetation	625
North Florida	100334	Special Needs Shelter	Vegetation	126
North Florida	300631	Fire	Storm	317
North Florida	301464	911	Storm	654
North Florida	300963	Water Treatment	Vegetation	42
North Florida	300961	Hospital	Vegetation	53
North Florida	300964	Hospital	Vegetation	33
North Florida	102631	Water Treatment	Unknown	650
North Florida	101634	Water Treatment	Vegetation	25
Treasure Coast	408262	Government Facility	Storm	526
Treasure Coast	402932	Water Treatment	Storm	625
Treasure Coast	408765	Sewage Treatment	Storm	1512
Treasure Coast	401137	Nursing Home	Vehicle	35
Treasure Coast	400663	Water Treatment	Storm	1815
South Dade	805733	911	Storm	29
South Dade	810366	911	Storm	43

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١	West Dade	810165	Government Facility	Storm	3
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Hurricane Irma

Location / Management Region	Feeder Number	Primary CIF Facility Served*	Outage Cause	Feeder Outage Duration (Minutes)
Boca Raton	400533	911	Storm	756
Boca Raton	400733	Government Facility	Other	2680
Boca Raton	400932	Water Treatment	Storm	3258
Boca Raton	400934	EOC	Storm	2
Boca Raton	401933	911	Storm	997
Boca Raton	401936	Government Facility	Storm	2165
Boca Raton	402833	911	Equipment Failure	5
Boca Raton	402835	911	Storm	1752
Boca Raton	403232	Waste Water Pump	Storm	1798
Boca Raton	403235	Acute Care	Storm	2
Boca Raton	403633	Water Treatment	Storm	2176
Boca Raton	404233	Police	Storm	1381
Boca Raton	404739	Police	Storm	2
Boca Raton	404839	Water Treatment	Storm	2989
Boca Raton	405032	Water Treatment	Storm	2
Boca Raton	405461	Critical Well Fields	Storm	1676
Boca Raton	405864	Critical Well Fields	Storm	3041
Boca Raton	405866	Fire	Storm	2300
Boca Raton	405867	Fire	Storm	2439
Boca Raton	406532	911	Storm	2730
Boca Raton	407931	911	Storm	51
Boca Raton	409634	Acute Care	Storm	3
Boca Raton	409862	Hospital	Storm	1637
Boca Raton	410362	Acute Care	Storm	317

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Boca Raton	413231	Acute Care	Storm	3724
Brevard	200431	Acute Care	Storm	3134
Brevard	200432	911	Storm	1296
Brevard	200734	Acute Care	Unknown	2351
Brevard	201231	Waste Water Pump	Storm	107
Brevard	201632	Acute Care	Other	20
Brevard	201834	911	Other	2866
Brevard	201933	Police	Other	1145
Brevard	202031	911	Storm	1651
Brevard	203131	911	Storm	468
Brevard	203234	911	Storm	2935
Brevard	203331	Coast Guard	Storm	698
Brevard	203538	Sewage Treatment	Storm	614
Brevard	203934	911	Storm	964
Brevard	204132	911	Other	526
Brevard	204262	911	Storm	2423
Brevard	205535	Hospital	Storm	168
Brevard	205631	Water Treatment	Storm	2546
Brevard	207361	Needs Shelter	Storm	308
Brevard	208162	Needs Shelter	Storm	2594
Brevard	210531	Police	Storm	1617
Central	800440	911	Storm	6453
Central	800634	Waste Water Pump	Storm	3731
Central	803536	Hospital	Storm	75
Central	803545	Hospital	Storm	1548
Central	805031	Acute Care	Storm	1444
Central	805235	Acute Care	Storm	5258
Central	805237	Acute Care	Storm	3316
Central Florida	100135	Fire	Unknown	261
Central Florida	100832	Sewage Treatment	Storm	257

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Central Florida	100838	Acute Care	Vegetation	2175
Central Florida	100936	Police	Storm	2026
Central Florida	101138	Sewage Treatment	Storm	1319
Central Florida	101462	Acute Care	Storm	3332
Central Florida	101466	911	Storm	899
Central Florida	101931	Water Treatment	Storm	5
Central Florida	101934	Sewage Treatment	Storm	2368
Central Florida	101935	Water Treatment	Storm	1788
Central Florida	102031	Waste Water Pump	Storm	1029
Central Florida	102361	Sewage Treatment	Storm	549
Central Florida	103831	Police	Storm	2418
Central Florida	103834	Critical Well Fields	Storm	2346
Central Florida	105062	Sewage Treatment	Storm	3648
Central Florida	106063	Water Treatment	Storm	945
Central Florida	107161	911	Vegetation	3163
Central Florida	107162	Air Transportation Facility	Vegetation	878
Central Florida	109032	Police	Vegetation	854
Central Florida	200131	Acute Care	Storm	2466
Central Florida	201436	Air Transportation Facility	Storm	1407
Central Florida	204636	911	Vegetation	47
Central Florida	205363	911	Storm	1878
Central Florida	207262	911	Storm	2450
Central Florida	207931	Water Treatment	Storm	1257
Gulfstream	700234	Critical Well Fields	Storm	637
Gulfstream	700236	Sewage Treatment	Storm	1988

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Gulfstream	701534	Government	Storm	3138
		Facility		
Gulfstream	701735	Critical Well Fields	Storm	5
Gulfstream	702031	Waste Water Pump	Storm	2147
Gulfstream	702833	Hospital	Storm	1105
Gulfstream	702835	Hospital	Storm	1778
Gulfstream	703133	Police	Storm	3800
Gulfstream	703436	Police	Storm	1840
Gulfstream	703832	Fire	Storm	3483
Gulfstream	703835	Acute Care	Storm	3621
Gulfstream	704131	Police	Storm	5359
Gulfstream	704135	Hospital	Storm	2696
Gulfstream	704262	Police	Storm	1963
Gulfstream	704762	Acute Care	Storm	770
Gulfstream	706161	Police	Storm	1319
Gulfstream	706166	Acute Care	Storm	193
Gulfstream	706367	Acute Care	Storm	1797
Gulfstream	706964	EOC	Storm	3534
Manasota	500234	Government Facility	Storm	872
Manasota	500239	Government Facility	Equipment Failure	1559
Manasota	500333	Acute Care	Storm	1426
Manasota	500334	Water Treatment	Storm	779
Manasota	500661	Waste Water Pump	Unknown	72
Manasota	500663	Government Facility	Equipment Failure	2636
Manasota	500664	Government Facility	Storm	736
Manasota	500933	911	Vegetation	1719
Manasota	501063	EOC	Storm	1300
Manasota	502563	Government Facility	Vegetation	2964

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Manasota50Manasota50Manasota50Manasota50Manasota50	04135 04667 05165	Police 911 911 Acute Care	Storm Storm Storm	211 1122 1060
Manasota50Manasota50Manasota50	04667 05165	911		
Manasota 50 Manasota 50	05165		Storm	1060
Manasota 50		Acute Care		_~~~
	05264		Storm	116
Manasota 50		Sewage Treatment	Storm	1486
	05764	EOC	Vegetation	1445
Manasota 50	07161	Critical Well Fields	Storm	2934
Naples 50	01232	Acute Care	Other	568
Naples 50	01234	Government Facility	Storm	1577
Naples 50	01237	Hospital	Storm	1054
Naples 50	03965	Needs Shelter	Storm	3488
Naples 50	06162	911	Equipment Failure	4035
Naples 50	06165	EOC	Equipment Failure	3503
Naples 50	06663	Acute Care	Other	322
Naples 50	06762	Acute Care	Storm	1714
Naples 50	07266	Fire	Vegetation	3331
Naples 50	07466	Fire	Storm	84
Naples 50	07661	Acute Care	Storm	1953
Naples 50	07761	Acute Care	Storm	4394
Naples 50	07763	Government Facility	Storm	1952
North Dade 80	01832	Police	Storm	793
North Dade 80	01836	Water Treatment	Storm	777
North Dade 80	02533	911	Storm	4993
North Dade 80	03438	Acute Care	Storm	1130
North Dade 80	04733	Fire	Storm	4566
North Dade 80	05932	911	Storm	247
North Dade 80	08733	EOC	Storm	6426
North Florida 10	00233	Police	Storm	1117
		Needs Shelter	Storm	1906

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	100.000			12.12
North Florida	100632	Fire	Equipment Failure	4349
North Florida	101634	Critical Well Fields	Vegetation	80
North Florida	102631	Critical Well Fields	Storm	3945
North Florida	102635	Police	Vegetation	86
North Florida	104731	Water Treatment	Storm	1629
North Florida	105132	Fire	Storm	2691
North Florida	106234	Acute Care	Storm	573
North Florida	106236	Police	Storm	1548
North Florida	300631	Fire	Storm	8
North Florida	300633	911	Storm	2367
North Florida	300634	Needs Shelter	Storm	3346
North Florida	300961	Hospital	Vegetation	660
North Florida	300963	Water Treatment	Vegetation	19
North Florida	300964	911	Vegetation	877
North Florida	301132	Acute Care	Storm	1697
North Florida	301138	Acute Care	Equipment Failure	3741
North Florida	301331	EOC	Storm	3243
North Florida	301464	911	Storm	929
North Florida	305232	Critical Well Fields	Storm	1735
North Florida	306133	911	Storm	1209
North Florida	307561	Fire	Storm	3313
North Florida	308061	Air Transportation Facility	Vegetation	1525
Pompano	701033	Fire	Storm	2794
Pompano	701134	Acute Care	Storm	3371
Pompano	702631	Air Transportation Facility	Equipment Failure	2443
Pompano	702632	Needs Shelter	Storm	3453
Pompano	702636	EOC	Storm	3965
Pompano	702936	Police	Storm	2436
Pompano	703533	Government Facility	Storm	2557
Pompano	703633	EOC	Storm	1321
Pompano	703635	Government Facility	Storm	1444
Pompano	703637	Critical Well Fields	Other	21
Pompano	703638	Critical Well Fields	Storm	3545

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Pompano	703731	Acute Care	Storm	1303
Pompano	704563	Hospital	Storm	1688
Pompano	704564	Acute Care	Storm	406
Pompano	704665	Needs Shelter	Storm	4169
Pompano	705464	Fire	Storm	2072
Pompano	705468	EOC	Storm	3488
Pompano	705633	EOC	Equipment Failure	1381
Pompano	706462	Fire	Storm	5760
South Dade	801634	Water Treatment	Storm	4589
South Dade	802432	Acute Care	Unknown	2527
South Dade	802434	Acute Care	Storm	2102
South Dade	802731	Fire	Vegetation	565
South Dade	802735	Waste Water Pump	Storm	1974
South Dade	803138	Water Treatment	Storm	1542
South Dade	803236	Water Treatment	Storm	5129
South Dade	804236	Fire	Storm	4622
South Dade	804332	Acute Care	Storm	1431
South Dade	804339	Acute Care	Storm	1208
South Dade	804340	Acute Care	Storm	2002
South Dade	805733	911	Storm	5259
South Dade	805832	Acute Care	Storm	525
South Dade	806534	911	Storm	4185
South Dade	807339	Fire	Storm	2398
South Dade	807432	Acute Care	Storm	3668
South Dade	807433	Water Treatment	Storm	3056
South Dade	807438	Acute Care	Storm	3726
South Dade	807634	Waste Water Pump	Storm	511
South Dade	808264	Police	Storm	653
South Dade	808337	Hospital	Storm	1525

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South Dade	808931	Acute Care	Storm	472
South Dade	809231	Acute Care	Storm	829
South Dade	809434	Fire	Storm	4476
South Dade	809666	911	Vegetation	147
South Dade	809667	Air Transportation Facility	Storm	3117
South Dade	810063	Fire	Other	233
South Dade	810366	911	Storm	5249
South Dade	810661	Fire	Storm	1741
South Dade	811264	Fire	Storm	1088
Toledo Blade	500763	911	Storm	7
Toledo Blade	500765	Acute Care	Storm	1
Toledo Blade	501137	Acute Care	Storm	1181
Toledo Blade	501431	Government Facility	Storm	7
Toledo Blade	501433	911	Storm	2881
Toledo Blade	501435	Acute Care	Storm	1013
Toledo Blade	501537	POLICE	Storm	7
Toledo Blade	501538	Hospital	Storm	7
Toledo Blade	502061	Acute Care	Storm	7
Toledo Blade	502461	911	Storm	277
Toledo Blade	502462	Government Facility	Storm	5038
Toledo Blade	502464	Electric Bridge	Storm	5258
Toledo Blade	503262	Water Treatment	Storm	8
Toledo Blade	503264	911	Storm	578
Toledo Blade	503265	EOC	Storm	1420
Toledo Blade	503761	911	Storm	1773
Toledo Blade	503765	EOC	Storm	7
Toledo Blade	503862	Fire	Storm	4206
Toledo Blade	503864	Fire	Storm	3163
Toledo Blade	503865	Government Facility	Storm	1374
Toledo Blade	504431	Water Treatment	Storm	7
Toledo Blade	504433	911	Storm	1069

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Toledo Blade	504761	EOC	Equipment Failure	6
Toledo Blade	505061	Police	Storm	638
Toledo Blade	505463	Air Transportation Facility	Storm	4
Toledo Blade	505464	EOC	Storm	4
Toledo Blade	505662	Sewage Treatment	Storm	7
Toledo Blade	506364	Water Treatment	Storm	8
Toledo Blade	506462	911	Storm	308
Toledo Blade	507961	Sewage Treatment	Storm	40
Toledo Blade	508463	Fire	Storm	5027
Treasure Coast	400663	Water Treatment	Other	2155
Treasure Coast	401135	Police	Unknown	554
Treasure Coast	401138	Acute Care	Vegetation	844
Treasure Coast	401632	EOC	Storm	254
Treasure Coast	401633	Acute Care	Storm	1546
Treasure Coast	401634	Government Facility	Storm	1718
Treasure Coast	401636	Needs Shelter	Storm	2399
Treasure Coast	401762	Water Treatment	Storm	1095
Treasure Coast	402932	Water Treatment	Storm	2510
Treasure Coast	404938	Hospital	Storm	1324
Treasure Coast	404939	Acute Care	Storm	1242
Treasure Coast	405763	911	Storm	1569
Treasure Coast	408331	Government Facility	Storm	2549
Treasure Coast	408765	Sewage Treatment	Storm	2449
Treasure Coast	410161	Water Treatment	Storm	2391
Treasure Coast	411561	Government Facility	Storm	2703
Treasure Coast	411662	EOC	Storm	1317
West Dade	800538	Air Transportation Facility	Storm	1870

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West Dade	801732	Acute Care	Storm	636
West Dade	801734	Hospital	Storm	2047
West Dade	801737	Acute Care	Storm	1231
West Dade	803034	Fire	Storm	1991
West Dade	803636	Acute Care	Storm	2028
West Dade	803637	Fire	Storm	1095
West Dade	804535	Acute Care	Storm	311
West Dade	805531	Fire	Storm	467
West Dade	805535	911	Storm	2152
West Dade	807037	Hospital	Storm	1050
West Dade	807231	Waste Water Pump	Equipment Failure	3006
West Dade	808061	Police	Storm	4695
West Dade	808166	Police	Storm	1882
West Dade	808168	Acute Care	Storm	2391
West Dade	809764	Police	Storm	2017
West Dade	810161	Hospital	Storm	816
West Dade	810162	Critical Well Fields	Storm	38
West Dade	810165	Government Facility	Storm	3376
West Dade	810265	Fire	Storm	343
West Dade	811064	Police	Equipment Failure	1867
West Dade	811562	Fire	Storm	2020
West Dade	811563	Fire	Other	32
West Dade	811564	Police	Storm	1564
West Dade	812162	911	Storm	4390
West Palm Beach	400334	Acute Care	Vegetation	302
West Palm Beach	400338	Government Facility	Other	2167
West Palm Beach	402634	Acute Care	Storm	1178
West Palm Beach	403034	Air Transportation Facility	Storm	18

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West Palm	403736	EOC	Storm	1950
Beach West Palm	405264	Needs Shelter	Storm	1373
Beach	403204	Neeus Sileitei	Storm	1373
West Palm Beach	407234	Water Treatment	Storm	1626
West Palm Beach	407236	Government Facility	Storm	1593
West Palm Beach	407331	911	Equipment Failure	1155
West Palm Beach	408664	EOC	Other	4173
West Palm Beach	409431	Acute Care	Storm	1248
West Palm Beach	409762	Government Facility	Storm	1494
West Palm Beach	410231	Air Transportation Facility	Storm	1572
West Palm Beach	410232	911	Storm	1109
West Palm Beach	410531	Acute Care	Storm	859
West Palm Beach	411861	Acute Care	Storm	1927
Wingate	700136	Fire	Storm	2169
Wingate	700432	Fire	Storm	2314
Wingate	700737	911	Storm	223
Wingate	701431	Seaport	Storm	2382
Wingate	701437	Government Facility	Storm	3221
Wingate	701631	Acute Care	Customer Request	2029
Wingate	701638	Fire	Storm	1030
Wingate	701934	Acute Care	Storm	466
Wingate	701937	Waste Water Pump	Vegetation	1587
Wingate	703236	Police	Storm	835
Wingate	704663	Hospital	Storm	3211
Wingate	704664	Fire	Storm	1072
Wingate	706665	Needs Shelter	Storm	4478

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Wingate	707533	Waste Water Pump	Storm	5287
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* Primary CIF customer served, as CIF feeders can serve more than one CIF customer

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QUESTION:

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.

RESPONSE:

In general, for Hurricanes Hermine, Matthew, Irma and Nate (Maria did not impact FPL's service territory), FPL's underground facilities performed as expected and generally better than overhead facilities. The percentages below reflect the number of underground feeders and laterals that experienced an outage divided by the population of underground feeders and laterals impacted by each storm.

	% UG Feeders Out /	% UG Laterals Out /
<u>Hurricane</u>	Total UG Feeders Impacted	Total UG Laterals Impacted
Hermine	0.2%	0.1%
Matthew	2%	0.2%
Irma	19%	3.6%
Nate	0%	0.1%

Underground outages and underground equipment facilities damage primarily resulted from wind-blown tree/debris impacts, trees that fell or uprooted and flooding and storm surge.

See FPL's response to Staff's First Data Request No. 29, for the requested information for underground feeders and laterals repaired or replaced.

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QUESTION:

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

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

RESPONSE:

FPL offers two approved tariffs (see below) that promote placing facilities underground by providing incentives (i.e., reductions in contribution-in-aid of construction):

- a. FPL Tariff Sheet No. 6.100, Section 10.3 Underground Distribution Facilities for Residential Subdivisions and Developments; and
- b. FPL Tariff Sheet No. 6.300, Installation of Underground Electric Distribution Facilities for the Conversion of Overhead Electric Distribution Facilities.

Also, FPL's External Affairs managers make presentations (over 900 such presentations were made in 2016) to educate communities FPL serves on various topics of interest, including the incentives FPL provides for constructing new underground facilities and converting overhead distribution facilities to underground.