Matthew R. Bernier
ASSOCIATE GENERAL COUNSEL

December 7, 2018

VIA ELECTRONIC MAIL

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

Re: *Review of 2019-2021 Storm Hardening Plan, Duke Energy Florida, LLC;*
Docket No. 20180146-EI

Dear Ms. Stauffer:

Please find attached for filing on behalf of Duke Energy Florida, LLC, its response to Staff's First Data Request (Nos. 1-6) in the above-referenced Docket.

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1428 should you have any questions concerning this matter.

Respectfully,

/s/ Matthew R. Bernier

Matthew R. Bernier

MRB/cmk
Attachment

cc: Parties of Record

106 East College Avenue, Suite 800 ▪ Tallahassee, Florida 32301
Phone: 850.521.1428 ▪ Fax: 727.820.5041 ▪ Email: matthew.bernier@duke-energy.com

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished to the following by electronic mail this 7th day of December, 2018, to all parties of record as indicated below.

/s/ Matthew R. Bernier
Attorney

Jennifer Crawford / Johana Nieves Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 jcrawfor@psc.state.fl.us jnieves@psc.state.fl.us	J. R. Kelly / P. Christensen Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us christensen.patty@leg.state.fl.us

Duke Energy Florida, LLC's Response to Staff's First Data Request
re. Review of 2019-2021 Storm Hardening Plan (Nos. 1-6)

Docket No. 20180146-EI

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

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

Additionally, please complete the table below for the year 2018.

Meetings with Local Government					
Entity	**Date(s)**	**Topics**	**Pending Issues/Follow-up Items**	**Contact information provided to local authorities**	
				Y	**N**

RESPONSE:
Maintaining trees and vegetation along distribution and transmission right-of- ways helps reduce outages on a day-to- day basis as well as during storm events and enhances safety for customers, the public, and DEF's employees and contractors. DEF maintains a rigorous inspection process that identifies vegetation encroachments and ensures vegetation management activities follow required pruning and clearance specifications.

To enhance communication with DEF's communities regarding specific tree trimming projects, DEF meets with local governments prior to the implementation of significant projects in order to inform them of the general areas that are expected to be impacted, note concerns, and answer questions. DEF also conducts communication and outreach to customers along the impacted areas for significant activities to inform them of the project, as well as explain the need for vegetation management.

As necessary, but at a minimum quarterly, the following actions take place:

- Local Vegetation management specialists (VM) finalize the feeder circuits to be completed by updating the "quarter/month" field of their respective area's work plan. The VM Specialist provides additional information to the Divisional Forester on any circuit that may be deemed as a sensitive area. The divisional forester will review each of the circuits noted by the VMS and determine which local governments will be affected by the work.

- Notification emails providing information is sent directly to local government staff in compliance with §163.3209, Fla. Stat.
- The DEF Government and Community Relations Managers (GCRMs) may provide updated local government contact lists annually or as needed. Local government websites, Florida League of Cities, or Divisional Forester local government contacts may also be used as a resource for determining contact information.
- An attempt is made to send to multiple points of contact within the local government with emphasis given to City/County Managers, Public Works leaders, and City Clerks who may pass along the information to other departments as needed.
- Maps showing basic line information (no equipment) may be provided to municipalities to indicate approximate work locations.
- Face to face meetings are scheduled upon request.

Notification emails contain a link to www.duke-energy.com/trees where local governments can find additional information on DEF's vegetation management practices. The webpage contains information on "Right Tree, Right Place" and links to outside resources such as the Arbor Day Foundation and International Society of Arboriculture that also promote these practices.

"Right Tree, Right Place" conversations are also had with local governments throughout the year. DEF may discuss the right tree, right place concept with local governments when obtaining removal permits for incompatible trees, supporting Arbor Day Events, and reviewing new planting projects. Many of the local governments DEF works with also have a "Tree City USA" designation through the Arbor Day Foundation. From January to April, 2018, DEF's vegetation management team sent over 50,000 emails to customers in Pinellas, Polk and Seminole counties explaining the program and the benefits of planting trees in order to provide maximum growth without hindering power lines.

All customer outages are important. Following significant events, restoring power first to facilities necessary to provide health, welfare and public safety to communities is essential. DEF works with local governments and the county Emergency Operation Centers (EOCs) to identify and prioritize these facilities and associated feeder circuits within the counties. This prioritization of these critical accounts is factored into restoration activities by DEF's operation centers during storms. The critical infrastructure/facilities list is reviewed annually with the county EOCs. DEF supports the needs of its local governments through support at the county EOC and this is reiterated to local municipalities who share their priority infrastructure needs with the county EOC.

An example lesson learned from recent storm events is the need for flexibility within DEF's storm communications with local governments. Hurricane Michael brought a complete loss of telephonic communication in some areas. While DEF had a representative at the County EOC, some local governments could not reach their EOC. Once DEF recognized this gap, DEF made efforts to provide in-person briefings to municipalities and utilize its social media platforms to provide localized information about the progress of DEF's restoration efforts.

At a minimum, DEF Transmission meets with 15 Municipalities, annually; these municipalities are delivery points/PODs and are located within DEF-Transmission service area. Specifically, the municipalities met with as of end of 3rd Quarter, 2018 are listed below. The City of Newberry was the only muni, thus far, that requested follow up around veg management was with; DEF-Transmission connected City of Newberry with DEF-Distribution veg management contact; questions were responded to and follow up closed out.

Meetings with Local Government					
Entity	**Date(s)**	**Topics**	**Pending Issues/ Follow-up Items**	**Contact information provided to local authorities**	
				Y	**N**
Sumter County	1/10/18	ESF8 Sumter Co "How Do We Restore Power" presentation		Y	
Sumter County	1/25/2018	Emergency Management Advisory Committee		Y	
City of Umatilla Chamber of Commerce	2/1/2018	Hurricane Preparedness and Response		Y	
City of Monticello	2/20/2018	Hurricane Preparedness and Response		Y	
City of Leesburg Chamber of Commerce	2/22/2018	Hurricane Preparedness and Response		Y	
Franklin County EOC	3/1/2018	Pre-season Annual EOC Visit			
City of Clearwater Public Works Department	3/15/2018	Critical Infrastructure Discussion	Continued development and updating of critical infrastructure	Y	
City of St. Petersburg	3/20/18	Discussion on storm power quality, vegetation management, large account management and other community issues		Y	
Haines City	3/28/2018	Hurricane Preparedness and Response		Y	
Avon Park Chamber of Commerce	3/29/2018	Hurricane Preparedness and Response		Y	
City of St. Petersburg	4/2/2018	Disaster Recovery Post Storm		Y	

Hernando County EOC	4/17/2018	2018 Hurricane Tabletop Exercise		Y	
Hernando County EOC	4/18/2018	Hernando County EOC Drill Exercise		Y	
Osceola County EOC	4/27/2018	Lessons Learned discussion post 2017.	Future Improvements to storm response.	Y	
Sumter EOC	4/27/2018	Sumter County EOC Storm Drill		Y	
Florida State EOC	4/30/2018	Florida State EOC Annual Drill		Y	
Lake County	4/30/2018	Lake County Local Mitigation Strategy Working Group Seminar	DEF and Lake County stakeholders discussed how to improve the before, during and after of power restoration.	Y	
Lake County EOC	5/1/2018	Lake County Office of Emergency Management EOC Participation with Florida Division of Emergency Management.	WebEOC and resource management software	Y	
Levy County EOC	5/1/2018	2018 Hurricane Season Kick Off Meeting		Y	
PSC	5/2/2018	PSC Hurricane Workshop		Y	
Lake County EOC	5/2/2018	Storm event lessons learned with other electric utilities and Lake county government.		Y	
Citrus County	5/3/2018	Citrus County Hurricane Exercise		Y	
Wakulla County EOC	5/7/2018	Wakulla EOC Planning Meeting	Critical infrastructure lists	Y	
Taylor County EOC	5/8/2018	Taylor County Emergency Management Stakeholders Advisory Group		Y	
City of St. Petersburg	5/10/218	Hurricane Irma Review	General Storm Preparation	Y	
City of St. Petersburg	5/12/2018	Hurricane Expo with St. Petersburg Fire and Rescue		Y	
Citrus County Sheriff’s Office	5/12/2018	Annual Hurricane & All Hazards Expo held by Citrus County Sheriff's Office, Division of		Y	

		Emergency Operations, Emergency management.			
Florida Division of Emergency Management, Florida Emergency Preparedness Association, Red Cross, NOAA	5/14/2018	I3 Exercise (Independent Infrastructure Incident - NSF PRAISys Project (National Science Foundation)	Participated as a panelist and research contributor as part of emergency preparedness, 40 trainings, 50 workshops, and simulated disaster scenarios.	Y	
Clearwater Gas, Clearwater Police, Clearwater City Administrator, Clearwater Emergency Management	5/16/2018	Insight into the behind the scenes of a storm, creating company policies and restoring your business back to normalcy		Y	
Citrus County	5/16/2018	Citrus County First Responders Recognition Event – DEF presented on the importance of first responders in storm response		Y	
Sumter County BOCC, Emergency Management Division	5/22/2018	Planning meeting with public works and utility providers on utility restoration and prioritization.	Critical infrastructure lists	Y	
Seminole County EOC	5/25/2018	Annual EOC Visit		Y	
Orange County	5/31/2018	Panel discussion, storm preparedness and live line demonstration for community leaders and first responders		Y	
Marion EOC	5/31/2018	Marion County EOC Storm Drill		Y	
Hernando County EOC	5/31/2018	County Wide Hurricane Exercise	Critical infrastructure lists	Y	
Hernando County EOC	6/4/2018	Continued discussion from 5/31/2018 exercise		Y	
Air & Waste Management Conference	6/5/2018	Hurricane Preparedness, DEF response to an imminent storm and responding to the aftermath, storm hardening to minimize damage to generation and transmission/distribution.	Audience was other electric utilities and regulators	Y	

Sumter EOC	6/5/2018	Critical Infrastructure discussion and training		Y	
Highlands County	6/8/2018	Highlands County Hurricane Expo storm preparedness presentation		Y	
St. Petersburg Fire and Rescue	6/9/2018	Hurricane Preparedness Expo – presented on Hurricane Preparedness and Response		Y	
Ocala/Marion County Chamber & Economic Partnership Breakfast	6/12/2018	Attended in collaboration with Sumter Electric Cooperative on “Storm Ready”.		Y	
Lake County and Florida Public Relations Association Lake Chapter	6/13/2018	Presentation "In the Eye of the Storm: How DEF Communicates during Crisis"		Y	
The City of Winter Springs Public Works Director and the Senior Planner for Seminole County	6/14/2018	Addressed hurricane preparedness and improvements in regards to power line easements.		Y	
Franklin County EOC	6/18/2018	EOC Visit		Y	
Lake County EOC	6/21/2018	Discussion on the increased number of shelters in Lake County and WebEOC		Y	
Florida Association of Counties	6/26/2018	Presented Hurricane Preparedness and Response to FAC		Y	
Sumter EOC	6/28/2018	Sumter County Hurricane Workshop		Y	
City of Deland	7/10/2018	Storm preparation meeting with City of Deland with government field supervisors and mid-level leadership for each organization.		Y	
Volusia County EOC	7/16/2018	Annual meeting with EOC Director. Discussed lessons learned from 2017.		Y	
Pasco County EOC	7/17/2018	Discussed EOC staffing, road clearing, vegetation management and the critical customer/restoration priorities with the Assistant Director of Emergency Management.		Y	
Marion County EOC	7/18/2018	EOC Visit			

Citrus County EOC	7/18/2018	EOC Visit		Y	
Bay Pines VA Healthcare System, American Red Cross, Seminole Fire, and the Veteran's Integrated Service Network Emergency Management team		Emergency Preparedness Fair to provide important resources to Veterans and employees to help them prepare for emergencies. DEF presented on hurricane preparedness.		Y	
Levy County EOC	7/23/2018	EOC Visit		Y	
Pinellas County EOC	7/24/2018	Meeting with the new interim Director David Halstead. Topics of discussion: what will be different in 2018 that DEF has improved upon from last year, restoration times and expectations, D1/R1 process, restoration process and critical facilities lists, how Duke restores and how DEF takes direction from the County on their priorities and that of the local cities, as well as road clearing successes and future.		Y	
Alachua County EOC	7/26/2018	EOC Visit		Y	
City of Fort White	7/26/2018	Hurricane Preparedness and Response		Y	
City of Deland	7/26/2018	Hurricane Preparedness and Response		Y	
Orange County EOC	8/2/2018	Annual EOC Visit		Y	
Marion County EOC	8/2/2018	EOC Visit			
City of Deland: Public Works Director, Public Works Operations Manager, Street/Stormwater, Tree/Urban	8/2/2018	The purpose was to discuss Road Clearing, Lift Stations, Critical Customer lists, DEF's Hurricane plan, lessons learned and how DEF has improved		Y	
Highlands County EOC	8/7/2018	Annual EOC Visit		Y	

Taylor County EOC	8/7/2018	Annual EOC Visit			
Hernando County EOC	8/7/2018	EOC Visit			
Sumter County EOC	8/8/2018	Teleconference with Sumter EOC		Y	
Orange County EOC	8/8/2018	Orange County's 2018 EOC COOP (Continuity Of Operation Plan) Exercise to discuss sinkholes opening up at the primary EOC location and the function of E-Team. (County's Incident Tracking System)		Y	
City of Tarpon Springs: Public Works Director, Streets & Stormwater Supervisor	8/10/2018	Met to discuss DEF's 2018 Storm Response & Preparedness Planning. Reviewed the critical facilities/customer list, restoration priorities, DEF's priority ranking system, EOC staffing, WebEOC, and road clearing.		Y	
Gilchrist EOC	8/13/2018	Annual EOC Visit		Y	
City of Safety Harbor: Assistant City Manager, Public Works Director	8/16/2018	Met to discuss DEF's 2018 Storm Response & Preparedness Planning. Reviewed the critical facilities/customer list, restoration priorities, deploying generators to support critical infrastructure, EOC staffing, Web EOC and road clearing.		Y	
Polk County EOC: Polk County EM Program Manager, Polk County EM Director, field rep for Congressman Darren Soto, 9th District.	8/16/2018	Meeting to review DEF's Storm Plan and Response. Reviewed the DEF Incident Command system and operations, the road clearing program and requirements, the planning and use of the critical facilities/customer list, and general discussion of the state requirements for ALF and nursing homes.	Further review on the critical facilities/customer list.	Y	
Polk County	8/16/2018	Live line demonstration and Hurricane Irma lessons learned presentation for first responders.		Y	

Highlands County EOC	8/20/2016	Discussion on critical infrastructure with Highlands county EOC.		Y	
City of Apopka Fire Department	8/21/2018	Updated facilities critical list, critical zones and intersections, potential flooding zones and Apopka's storm master plan.		Y	
City of Seminole	8/21/2018	Met with the Community Development Director to discuss the critical facilities/customer list and made updates, reviewed DEF's priority ranking system, EOC staffing, WebEOC, road clearing, storm staging sites.	Discussed a follow-up meeting to include the new Director of Public Works.	Y	
City of St. Petersburg Emergency Management Program Advisory Group	8/21/2018	Meeting to discuss the community's emergency preparedness and resilience, provide feedback on the draft of the 2018-2020 Emergency Management Strategic Plan.		Y	
Highlands County EOC: Highlands County EM Manager	8/23/2018	Meeting to review DEF Critical facility/customer list for county priorities, how the list is established and used for priority restoration by feeder at the DEF storm rooms. Reviewed county facilities and shelters in the existing list, and added some facilities to the list.	Agreed to meet April 2019 to refresh list for 2019.	Y	
Polk County EOC: Polk County EM Program Manager, Polk County EM Director	8/24/2018	Meeting to review DEF Critical facility/ customer list for county priorities, how the list is established and used for priority restoration by feeder at the DEF storm rooms. The county is truing up their internal critical list. Note: DE account addresses are often not complaint with current 911 addressing standards.	List refresh for February 2019 timeframe.	Y	

Seminole County EOC	8/28/2018	Discussion regarding tagging meters that have been approved to re-energize during both “Grey Sky Days” & “Blue Sky Days”.		Y	
Hernando County EOC	8/30/2018	Focused on essential services and the customer including targeted undergrounding, Smart meters, hardening the grid, ETRs based on field review, EOC staffing, restoration priorities/critical facility/customer Lists, Citizen’s Information Lin, First Responder Guidance, road clearing, public safety vs. customer restoration, GIS service territory maps.		Y	
Gulf County EOC	8/30/2018	Discussed critical facility/customer lists and restoration process		Y	
City of Clermont: Fire Marshal, Assistant Fire Chief, Director of Capital Planning & Projects, Public Works Director, Police Captain	8/31/2018	Lessons learned from Hurricane Irma, including technology issues for outage information, restoration estimates, what to tell their citizens, critical customer feeders and Duke’s function at the EOC’s. Shared the critical facility/customer for the city of Clermont.		Y	
City of Zephyrhills	9/14/2018	Reviewed Zephyrhills critical facility/customer list, restoration priorities, EOC staffing, road clearing, and vegetation management, including trim cycles and recent tree trimming in the Zephyrhills area.	Follow up on WebEOC	Y	
Orange County EOC	9/26/2018	Threat Hazard Identification Risk Assignment and Stakeholder Preparedness Review at Orange county EOC. Duke attended as a representative for ESF 12.		Y	
Levy County EOC	10/2/2018	EOC visit		Y	
City of Leesburg	1/25/18	General Work-Project Info / Storm Prep Process	N/A	Y	
FMPA	3/15/18	General Work-Project Info / Storm Prep Process	N/A	Y	

City of Chattahoochee	4/17/18	General Work-Project Info / Storm Prep Process	N/A	Y	
City of Williston	4/18/18	General Work-Project Info / Storm Prep Process	N/A	Y	
City of Mt. Dora	4/25/18	General Work-Project Info / Storm Prep Process	N/A	Y	
City of Ocala	5/30/18	General Work-Project Info / Storm Prep Process	N/A	Y	
City of Bushnell	6/8/18	General Work-Project Info / Storm Prep Process	N/A	Y	
City of Newberry	6/19/18	General Work-Project Info / Storm Prep Process	Tree trimming on Distribution line - completed	Y	
City of Bartow	6/22/18	General Work-Project Info / Storm Prep Process	N/A	Y	
City of Wauchula	6/22/18	General Work-Project Info / Storm Prep Process	N/A	Y	
City of Quincy	8/15/18	General Work-Project Info / Storm Prep Process	N/A	Y	
FMEA	8/16/18	General Work-Project Info / Storm Prep Process	N/A	Y	

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

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

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

RESPONSE:
DEF works with the county EOCs as part of DEF's annual emergency planning and response program. DEF has a detailed plan to staff the county EOCs during mid-level and major storm events. Currently, there are approximately one hundred resources assigned to EOC staffing and supporting other EOC related functions such as road clearing and live wire down issues during a major storm event.

As part of staffing at the EOCs, prior to storm season, DEF holds meetings with the county EOCs as well as local communities, to discuss emergency planning preparations and coordination, participates in county drills and training exercises, and holds

community education workshops and events. DEF conducts an internal week-long storm preparedness training to simulate the response to a real storm including pre-storm preparations activities during a major storm event and post-storm response. During this exercise, the county EOCs are engaged as part of the simulation. As mentioned above, DEF also works with the county EOC to identify and prioritize specific infrastructure within the counties. Additionally, DEF provides the county EOCs detailed electronic outage information in the areas where DEF serves. The information is available in multiple formats, including formats that may be imported into county GIS systems. This outage data provides significant information to the county EOCs to assist in their response efforts.

The primary responsibility of the County EOC Representative is to work with the County EOC personnel to establish current priorities for restoration, and ensure the EOC priorities are worked successfully. The following activities are completed annually:

- Establish contact with assigned EOC in conjunction with the Government/Community Relations Managers.
- Review the updated Critical Infrastructure/Facility List with the assigned EOC.
- Review road clearing process for counties where applicable.
- Review the flooding protocol.
- Track all issues received from the EOC and communicate this information internally to the DEF Operation Center Liaison for restoration
- Provide regular briefings on restoration progress and deliver key messages to EOC personnel.

In addition to the DEF employees assigned to staff the county EOCs listed in the chart below, DEF has six Government and Community Relations Managers that develop and maintain strong relationships with the county EOC Directors and act as the main point of contact for community issues during a storm event.

DEF assigns dedicated personnel to each EOC where the EOC is staffed in person. However, the EOC staffing plan is scalable, depending on the severity, geography and needs of the individual storm. For a county EOC that may not be staffed in person, the Government and Community Relations Managers may act as the EOC point of contact or a dedicated representative will be assigned to provide support by phone. DEF also provides a direct point of contact for overnight coverage by phone to each EOC during an event, resulting in 24-hour coverage via a direct point of contact for the EOCs during an event.

A significant lesson learned with the State EOC and county EOCs is that priorities are fluid and can change quickly. While a great deal of effort supports identifying priorities in advance of storms, once the damage occurs it may result in a reprioritization of facilities. An example of this was in a small rural community with only one grocery store. After a storm, the EOC determined if the grocery store was not restored the county would need to establish a Point of Distribution for food and water. The message was passed through a DEF EOC Representative and pivoted the restoration efforts to support this new priority. DEF has built a plan designed to be flexible enough to address these

emergent issues after hurricanes.

Utility staffing practices at local EOCs		
EOC in Service Territory	**Number of Utility staff**	**Planned daily hours scheduled for working in the EOC**
Alachua (4,800 customers)	1	5am-9pm
Bay (2,100 customers)	1	5am-9pm
Brevard (9 customers)	0	Supported as needed remotely via phone
Citrus (46,000 customers)	1	5am-9pm
Columbia (550 customers)	1	5am-9pm
Dixie (1,800 customers)	1	5am-9pm
Flagler (15 customers)	0	Supported as needed remotely via phone
Franklin (10,000 customers)	1	5am-9pm
Gadsden (1 customer)	0	Supported as needed remotely via phone
Gilchrist (1,700 customers)	1	5am-9pm
Gulf (6,000 customers)	1	5am-9pm
Hamilton (3,000 customers)	1	5am-9pm
Hardee (2,700 customers)	0	Supported as needed remotely via phone
Hernando (10,500 customers)	2	5am-9pm
Highlands (53,000 customers)	2	5am-9pm
Hillsborough (25 customers)	0	Supported as needed remotely via phone
Jefferson (4,600 customers)	1	5am-9pm
Lafayette (850 customers)	1	5am-9pm
Lake (78,000 customers)	2	5am-9pm
Leon (55 customers)	0	Supported as needed remotely via phone
Levy (3,400 customers)	1	5am-9pm
Liberty (2 customers)	0	Supported as needed remotely via phone
Madison (3,800 customers)	1	5am-9pm
Marion (64,000 customers)	2	5am-9pm

Orange (348,000 customers)	3	5am-9pm
Osceola (36,500 customers)	2	5am-9pm
Pinellas (531,000 customers)	4	24 hours/day
Pasco (135,000 customers)	2	5am-9pm
Polk (92,000 customers)	2	5am-9pm
Seminole (151,000 customers)	2	5am-9pm
Sumter (9,500 customers)	1	5am-9pm
Suwannee (800 customers)	1	5am-9pm
Taylor (6,000 customers)	1	5am-9pm
Volusia (78,000 customers)	2	5am-9pm
Wakulla (6,600 customers)	1	5am-9pm

3. *Commission staff should collect information on how each IOU prepares for and responds to roadway congestion, fuel availability, and lodging accommodation issues as part of the Commission's review of utility storm hardening plans.*

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

RESPONSE:
DEF Incident Command Planning Section initiates the discussions with the Logistics Section around activation and resource needs (fuel, lodging, and transportation). The fuel plan and lodging plan are annually reviewed and updated to assure resources/services availability at the time of an event. For example, the lodging plan includes hotels and alternative housing (sleeper trailers brought in by contractors as part of emergency management contracts and internal plan). Lodging and fueling is procured prior to landfall and agreements are in place which include contingency. DEF has a representative located at the State EOC and County EOC's to assist with any coordination in these areas or request assistance where needed to support restoration efforts.

Route selection is conducted after all clear, after roadways are made safe (Transmission and Distribution (T&D damage assessment teams assist in this process), and after damage to roadways are communicated by DOT and local scouts/Damage Assessment (DA) teams (ground and air).

Support from DOT and highway patrol/police escorts would assist in the route selection process once DA is conducted.

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

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

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

RESPONSE:
DEF's selection process for Storm Hardening projects is a combination of the following items: major storm outage reduction, community storm impact, third party impact, overall reliability and cost.

- Major Storm Outage Reduction Impact
  - Determines the potential benefits that the project provides during a major storm based on reduced damages or the ability to restore power more rapidly.
- Community Storm Impact
  - Evaluates the potential benefits that the proposed project will have on a community's ability to cope with damage.
- Third Party Impact
  - Captures complexities of proposed projects in terms of coordination with third parties such as telecommunication, Cable TV, permitting, easements, costs, etc.
- Overall Reliability
  - Captures the overall potential reliability benefits that the project provides on a day to day basis in terms of reduced customer interruptions and outage duration.
- Financial Cost
  - Provides the financial value of the proposed project based on cost per customer and cost per foot of newly installed wire/cable.

Each of the different Storm Hardening Project types utilizes historic reliability information to drive the target selection process, such as: SAIFI, CEMI, events per mile, etc.

For example, the Deteriorated Conductor (DC) Program utilizes CMI and CEMI numbers normalized against the system average to identify the priority by which feeders should be addressed under the program.

The Targeted Underground (TUG) Program looks at outage per overhead line mile (events/mile) and extent of vegetation as two of its criteria.

DEF looks at long duration outages and feedback from operations to identify Feeder Tie targets.

The Self-Optimizing Grid (SOG) program ranks its potential targets based on customer count, critical customers served on feeders, amount of work required to create a successful grid (capacity upgrades, conductor upgrades, new feeder ties, etc.) and overall costs.

Recently, a line segment was identified under the DC program's rating criteria to be upgraded from the existing Copper conductor to a heavier gauge Aluminum conductor. The proposal was to re-feed the customers served from this segment with a shorter OH span running along the side of the road instead of between lots. The proposed location was heavily vegetated and would've required significant tree trimming for construction and ongoing vegetation management to maintain. The Program Engineer for DC contacted the Program Engineer for TUG to see if this line segment had been identified by TUG. The segment did meet TUG criteria of being heavily vegetated and having vegetation related outages, so the target was moved to TUG to improve reliability for these customers and reduce the long-term maintenance costs.

These types of reviews are currently being handled on a case by case basis, however DEF is developing a solution that utilizes GIS to highlight targets identified by each program so that overlap can be seen and evaluated more systematically.

DEF Transmission storm hardening process is documented within the annual reliability reports and the three year Storm Hardening Plan; it is driven initially by hardening transmission line poles by converting / changing out wood poles to 'hardened' material (steel or concrete) poles. This process includes identification of aged-out structures by inspections; ranking the structure's condition (Priorities 1 & 2s) and defining project/schedule for change-out based on structure condition, line reliability, engineering standards, and other planned work/rebuild projects. During all pole relocates, planned projects, and rebuild work transmission lines are built to the 'hardened' standards.

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

Please discuss the type of data the Utility plans to provide demonstrating performance of hardened vs. non-hardened facilities affected by wind only. Please discuss the type of

data the Utility plans to provide to compare overhead to underground facilities on a comparable basis. Please discuss any sampling data that may be readily available. Please include the format, economic considerations, and how the Utility would collect this data.

RESPONSE:
Where the opportunity exists to provide performance comparisons between hardened vs. non-hardened facilities for wind impacts, DEF Transmission will provide a summary narrative of the performance comparison, photographs, forensic analysis, and other specific data as requested, e.g. design and construction specifications. Transmission typically does not utilize undergrounding as a means to storm harden.

From a Distribution standpoint, storm hardened initiatives are intended to increase the ability of electric infrastructure facilities to withstand extreme weather conditions. In order to properly compare the performance of hardened versus non-hardened facilities, DEF will conduct Forensic Damage Assessments of both types of facilities immediately following extreme weather events.

A database of hardened line segments and comparative non-hardened line segments in the same area will be used, ensuring that both samples assessed experienced similar extreme weather conditions. The Forensics Damage Assessors will evaluate several factors, including:

- Pole Condition
- Pole Loading/Configuration
- Wire Condition
- Vegetation Density/Proximity/Type
- Environmental Conditions
- Foreign Debris Presence
- Damage to Surrounding Areas

The results of these forensic assessments will be compiled along with pole inspection, geospatial and vegetation management data for these circuits. These data sets will be analyzed to evaluate performance of the hardened circuits compared to the non-hardened circuits and determine if changes to hardening practices, construction standards, asset programs or vegetation programs are necessary.
The collection of this data will be conducted by contracted Damage Assessment teams lead by DEF employees. The intent is to utilize a similar number of teams as in previous post-event Forensics Assessments, but have these teams initially focus on evaluating the performance of hardened vs. non-hardened and then transition to performing pole forensics. This would result in minimal cost, but could result in fewer poles being forensically assessed before they are replaced by restoration crews. . The data would be collected using forensic forms and multiple photographs of each line segment to ensure detailed documentation of the post event status.

Underground facilities are more susceptible to storm surge and water intrusion; overhead facilities are more susceptible from debris being blown into the lines by high winds. Therefore, another means of comparison is needed to complement Forensic Damage

Assessment. These assessments need to take into consideration reliability trends over a period of time, for example DEF's Targeted Underground (TUG) Program focuses on long term reliability of overhead facilities to determine if they are a valid target for conversion. Vegetated outages per mile per year, extent of vegetation and complexity of design and construction are all items that are considered when evaluating TUG targets.

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

Please discuss the following:

a. Procedures followed if a non-electric utility pole is identified as being unstable or on the verge of failing.
b. Options an electric utility has if inspection of non-electric utility poles is not occurring.
c. Procedures followed when repairing/replacing non-electric utility poles during storm recovery (contact, billing, reimbursement, who does the repair).
d. Procedures followed when repairing/replacing non-electric utility poles during non - storm events (contact, billing, reimbursement, who does the repair).
e. General locations of poles – throughout the service territory or in a certain location.

Additionally, please complete the table below.

Electric vs. Non-Electric Utility Poles							
Total Number of Utility Distribution Poles		**Total Number of Non-Electric Utility Distribution Poles that the Utility is attached to**		**Number of Attached Non-Electric Utility Distribution Poles Repaired following Irma**		**Number of Attached Non-Electric Utility Distribution Poles Replaced following Irma**	
Feeders	**Laterals**	**Feeders**	**Laterals**	**Feeders**	**Laterals**	**Feeders**	**Laterals**

RESPONSE:

a. If a DEF employee or contractor identifies a non-electric owned utility pole requiring immediate replacement, the pole will be replaced by a DEF crew. DEF's Joint Use department will contact the non-electric utility pole owner and either bill the cost for the replacement or receive instructions to take ownership of the pole.

b. The joint use contracts stipulate that the pole owner will maintain their pole per the Code (NESC). Part of that NESC code includes inspecting and maintaining poles, however not all non-electric utility poles are regularly inspected by the owner. As

outlined above, DEF has a process for addressing immediate replacement poles. If DEF identifies a pole requiring non-immediate follow, a ticket is submitted via National Joint Utilities Notification System (NJUNS) requesting the owner to address the issue. If the issue is not resolved, DEF has the option of following the process outlined for immediate replacement poles.

c. During a storm recovery event, DEF is focused on safely restoring service to its customers and does not track ownership of the poles requiring replacement; therefore, DEF would repair/replace the damaged pole as appropriate. After the storm restoration is completed, the DEF joint use department does pole ownership audits every five years and trues up the pole ownership discrepancies through the audit process. If a pole that was previously a non-electric owned utility pole is identified as a DEF pole during the audit, the non-electric utility is notified through the National Joint Use Notification System (NJUNS) of the change.

d. As outlined above, DEF has a process for addressing poles that it deems critical for replacement; regarding poles that do not require immediate replacement, if a non-electric utility chooses to replace a pole they own, they can opt to replace with their own crews and notify DEF through the NJUNS process or contract DEF to replace the pole at the non-electric utility's expense.

e. The telephone companies have set designated territories for their service. DEF is attached to approximately 16k poles in these areas which accounts for 1.4% of the total distribution pole population spread throughout the Florida territory; conversely, communication companies made up of CATV, CLEC, ILEC, municipal and private attachments are on 508k DEF owned poles which equates to 46% of the total distribution pole population.

Electric vs. Non-Electric Utility Poles							
Total Number of Utility Distribution Poles		**Total Number of Non-Electric Utility Distribution Poles that the Utility is attached to**		**Number of Attached Non-Electric Utility Distribution Poles Repaired following Irma**		**Number of Attached Non-Electric Utility Distribution Poles Replaced following Irma**	
Feeders	**Laterals**	**Feeders**	**Laterals**	**Feeders**	**Laterals**	**Feeders**	**Laterals**
1.1M		16k		DEF does not track during restoration efforts		DEF does not track during restoration efforts	