DANIEL HERNANDEZ
PARTNER
Shutts & Bowen LLP
4301 W. Boy Scout Boulevard
Suite 300
Tampa, Florida 33607
DIRECT (813) 227-8114
FAX (813) 227-8214
EMAIL DHernandez@shutts.com

September 30, 2020

VIA ELECTRONIC FILING

Mr. Adam Teitzman, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

In re: Petition by Duke Energy Florida, LLC for approval of actual storm restoration costs and associated recovery process related to Hurricane Dorian and Tropical Storm Nestor; Docket No. 20190222-EI.

Dear Mr. Teitzman:

On behalf of Duke Energy Florida, LLC ("DEF"), please find the following enclosures for electronic filing in the above-referenced proceeding:

- DEF's Petition by Duke Energy Florida, LLC for Approval of Actual Storm Restoration Costs and Associated Recovery Process Related to Hurricane Dorian and Tropical Storm Nestor;
- Direct Testimony of Jason Cutliffe with Exhibit No.__ (JC-1), Exhibit No.__ (JC-2), Exhibit No.__ (JC-3), and Exhibit No.__ (JC-4);
- Direct Testimony of Jason S. Williams with Exhibit No.__ (JW-1);
- Direct Testimony of Thomas G. Foster with Exhibit No.__ (TGF-1); and
- Direct Testimony of Tom Morris with Exhibit No.__ (TM-1), Exhibit No.__ (TM-2), and Exhibit No.__ (TM-3).

Thank you for your assistance in this matter. Please feel free to call me at (813) 227-8114 should you have any questions concerning this filing.

Respectfully,

Shutts & Bowen LLP

/s/ Daniel Hernandez

Daniel Hernandez

Enclosures (as noted)

cc: All counsel for DEF

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by Duke Energy Florida, LLC for limited proceeding for recovery of incremental storm restoration costs related to Hurricane Dorian and Tropical Storm Nestor.	Docket No. 20190222-EI Filed: September 30, 2020

PETITION BY DUKE ENERGY FLORIDA, LLC FOR APPROVAL OF ACTUAL STORM RESTORATION COSTS AND ASSOCIATED RECOVERY PROCESS RELATED TO HURRICANE DORIAN AND TROPICAL STORM NESTOR

Duke Energy Florida, LLC ("DEF" or the "Company"), pursuant to Section 366.076(1), Florida Statutes ("F.S."), Rules 25-6.0143 and 25-6.0431, Florida Administrative Code ("F.A.C."), and the Second Revised and Restated 2017 Settlement Agreement approved by the Florida Public Service Commission (the "Commission") in Order No. PSC-2017-0451-AS-EU[1] (the "2017 Settlement"), hereby files this petition (the "Petition") requesting approval of (a) DEF's actual recoverable storm restoration costs and interest costs related to Hurricane Dorian and Tropical Storm Nestor (the "Recoverable Storm Costs") in the amount of $145.0 million, (b) DEF's recovery of such Recoverable Storm Costs in accordance with the 2017 Settlement and Order No. PSC-2020-0058-PCO-EI; (c) DEF's proposed true-up of any final over or under recovery amount. In support of this Petition, DEF states as follows:

Introduction

1. DEF is an investor-owned utility operating under the jurisdiction of the Commission pursuant to the provisions of Chapter 366, Florida Statutes. The Company's principal place of business is located at 299 1st Avenue North, St. Petersburg, Florida 33701.

[1] Docket No. 20170183-EI, issued on November 20, 2017.

2. This Petition is being filed in accordance with the requirements of Rule 28-106.201, F.A.C.[2]

3. The Commission, located at 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399, is the agency affected by this Petition. The Commission has jurisdiction over this matter pursuant to Sections 366.04, 366.05, 366.06 and 366.076, F.S., and Rules 25-6.0143 and 25-6.0431, F.A.C.

4. For purposes of this Petition and the resulting proceeding, Petitioner's address shall be that of its undersigned counsel. Any pleading, motion, notice, order or other document required to be served upon DEF or filed by any party to this proceeding should be served upon DEF's undersigned counsel.

5. DEF does not know which, if any, of the issues of material fact set forth in the body of this Petition, or the supporting testimony and exhibits, may be disputed by any others who may plan to participate in this proceeding.

Background and Overview

6. DEF serves more than 1.8 million customers in Florida. Its service area comprises approximately 20,000 square miles, including the densely populated areas of Pinellas and western Pasco Counties and the greater Orlando area in Orange, Osceola and Seminole Counties. DEF supplies electricity at retail to approximately 350 communities and at wholesale to Florida municipalities, utilities, and power agencies in the State of Florida.

7. On December 19, 2019, DEF filed a petition for a limited proceeding seeking authority to implement an interim storm restoration recovery charge to recover estimated

[2] Portions of subsections (2)(b)(c) and (f) of Rule 28-106.201, F.A.C., do not apply to this proceeding and are, therefore, not being addressed in this Petition.

Recoverable Storm Costs that DEF incurred in the amount of $171.3 million in connection with Hurricane Dorian and Tropical Storm ("TS") Nestor (the "Interim Storm Charge") (the "Interim Recovery Petition"). In the Interim Recovery Petition, DEF proposed spreading the Interim Storm Charge amount over a twelve (12) month period commencing in March 2020 and ending the earlier of full recovery or in February 2021 (the "Storm Recovery Period") pursuant to the 2017 Settlement.

8. By the Commission's Order Approving Duke Energy Florida, LLC's Request for an Interim Charge to Recover Costs Related to Hurricane Dorian and TS Nestor, PSC-2020-0058-PCO-EI, issued on February 24, 2020 (the "Order"), the Commission authorized DEF to implement the Interim Storm Charge subject to a final true-up based on any excess or shortfall of monies collected pursuant to the Interim Storm Charge.

9. In the Order, the PSC instructed DEF to file documentation demonstrating its actual storm costs incurred in connection with Hurricane Dorian and TS Nestor for the purpose of reconciling actual costs and directed that the docket be kept open for that purpose.

10. Accordingly and pursuant to the Order, DEF is filing this Petition with documentation to demonstrate the actual storm costs DEF incurred in connection with Hurricane Dorian and TS Nestor. This documentation consists of the pre-filed testimony, with accompanying exhibits, of DEF witnesses Jason Cutliffe, Jason S. Williams, Thomas G. Foster, and Tom Morris, which (a) document DEF's actual Recoverable Storm Costs amount of $145.0 million; (b) demonstrate that those costs were prudently incurred; (c) demonstrate that DEF accounted for those costs in accordance with the Incremental Cost and Capitalization Approach ("ICCA") methodology prescribed in Rule 25-6.0143, F.A.C.; and (d) describe the true-up mechanism for any excess or shortfall of monies collected pursuant to the interim storm restoration charge.

DEF's Storm Restoration Process For Hurricane Dorian and TS Nestor

11. On August 23, 2019, a low-pressure system that would ultimately become Hurricane Dorian formed over the Central Atlantic. The system strengthened to a tropical storm on August 25 as it moved through the Lesser Antilles and proceeded to develop into a hurricane on August 28 just north of the Greater Antilles. Over the next four days, Hurricane Dorian underwent rapid intensification to reach its peak as a Category 5 hurricane with sustained winds of 185 miles per hour and gusts over 200 miles per hour when it made landfall in the Bahamas.

12. Hurricane Dorian devastated the Bahamas. After it made landfall there, Hurricane Dorian stalled and spent two days pummeling the islands. The storm killed approximately seventy people in the Bahamas and caused damage that has been estimated at more than $7 billion. Hurricane Dorian left at least 70,000 people homeless, severely damaging or completely destroying an estimated 13,000 homes in the Bahamas.

13. On August 28, 2019, when it appeared from several hurricane models that Hurricane Dorian would directly impact Florida, local emergency offices in Florida began to prepare for Hurricane Dorian. Governor DeSantis declared a state of emergency for twenty-six Florida counties, which he expanded the very next day to encompass the entire state, citing to Hurricane Dorian's "uncertain path." At the time, the entire state of Florida was within Hurricane Dorian's "cone of uncertainty."

14. With a devastating storm apparently heading towards portions of its service territory, DEF prudently began preparations on August 28, 2019. Between August 28 and August 30, as the storm strengthened to a hurricane and was forecasted to make landfall somewhere in Florida, DEF mobilized approximately 7,800 total contractors and employee resources to support the restoration work.

15. On August 31, a tropical storm watch was issued along Florida's east coast from Deerfield Beach to Sebastian Inlet. The tropical storm watch was upgraded to a tropical storm warning just a few hours later. By September 1, a hurricane watch had been issued for parts of Florida's east coast that included Deerfield Beach, and Volusia and Broward Counties. The hurricane watch was upgraded to a hurricane warning later that same day, which prompted evacuations and school closings along Florida's east coast. On September 1, DEF remained ready to respond to the storm, as Hurricane Dorian was categorized as a Category 5 storm and continued to approach the east coast of Florida.

16. Early forecasts called for Hurricane Dorian to intersect Florida near the I-4 corridor and stall over central Florida, thus bringing torrential rains to the region. Based on DEF's prior experience with the crippling traffic congestion that occurred during Hurricane Irma, DEF prudently determined that Hurricane Dorian could materially hinder the movement of restoration and mutual assistance resources to DEF customers within Hurricane Dorian's path. In preparation for this, DEF implemented mobilization and logistics plans to pre-stage resources south of Hurricane Dorian's anticipated path.[3] DEF's goal with respect to these plans was to facilitate the allocation and mobilization of restoration and assistance resources to the impacted areas immediately following Hurricane Dorian's exit from the areas. Over the next several days, preparation plans were adjusted and modified as Hurricane Dorian's forecast changed.

17. On September 3, Hurricane Dorian slowly began to move away from the Bahamas and towards Florida, lashing the Florida coast with heavy wind gusts and rain. As Hurricane Dorian approached the Florida coast, approximately one hundred and fifty general and special

[3] These pre-staged resources were initially on-boarded and assigned to Wildwood, Orlando and Pinellas County. Off-system resources were staged in Georgia.

needs shelters opened across the state, and sixteen counties in Florida issued evacuation orders.

18. Notwithstanding several hurricane models that had previously showed Hurricane Dorian making a direct hit on Florida, on September 4 when it was just ninety-five miles off of Daytona Beach, Hurricane Dorian made a gradual turn northward and proceeded up the Florida coast.[4] Later that day, based on Hurricane Dorian's revised track and intensity forecast, DEF released all of its mutual assistance resources to support other electric utilities or to return to their home locations.

19. While Florida was spared the worst of Hurricane Dorian, sustained winds associated with the storm are estimated to have reached upwards of sixty miles per hour along Florida's coastline. Tropical storm-force winds in excess of thirty-nine miles per hour reached far inland into central Florida. Hurricane Dorian's winds ultimately caused approximately 24,000 DEF customers in the Central Florida region to lose power.

20. The magnitude of the damage caused by Hurricane Dorian is evidenced by the major disaster declaration issued by the federal government on October 21, 2019, for Brevard, Duval, Flagler, Indian River, Martin, Nassau, Osceola, Palm Beach, Putnam, Seminole, St. Johns and St. Lucie Counties.

21. On October 19, 2019, TS Nestor hit the Florida Panhandle near St. Vincent Island with maximum sustained winds of forty-five miles per hour and wind gusts of sixty-one miles per hour. TS Nestor was a short-lived tropical storm that brought storm surge flooding and soaking rain to the Florida Panhandle. TS Nestor's main legacy, however, was the number of tornadoes it

[4] Four high pressure systems, part of the dynamic atmospheric system that made Hurricane Dorian so hard to predict, stalled the hurricane over the Bahamas for nearly two days. It was not until these systems shifted that Hurricane Dorian was able to continue north.

spawned prior to making landfall in the Florida Panhandle. In total, four tornadoes touched down in Florida near St. Petersburg, Lakeland, Cape Coral and Indian River, toppling trees and damaging homes.

22. TS Nestor caused 709 outage events in DEF's service territory and impacted 41,669 DEF customers. DEF's restoration work related to TS Nestor occurred between October 18 and October 19, 2019.

23. In his pre-filed testimony, Mr. Cutliffe discusses the operation of the Company's storm plan as it relates to DEF's distribution system, including the Company's goals and priorities as it prepares for, responds to, and recovers from a storm's impact on its distribution facilities. He explains the unique challenges faced by DEF to implement its storm plan and restoration processes for Hurricane Dorian and TS Nestor. Mr. Cutliffe also describes DEF's successful implementation of its storm plan in response to Hurricane Dorian and TS Nestor, which allowed DEF to restore electric service in a safe and efficient manner for its customers.

24. Mr. Williams' pre-filed testimony provides an overview of DEF's transmission storm plan and the implementation of that plan during Hurricane Dorian and TS Nestor. Mr. Williams also testifies about the Company's efforts to prepare for, respond to, and recover from Hurricane Dorian and TS Nestor.

25. Mr. Foster's pre-filed testimony provides an explanation of DEF's proposed true-up of any final over or under recovery amount related to the Interim Storm Restoration Recovery Charges effective the first billing cycle of March 2020 and ending either the earlier of full recovery or the last billing cycle of February 2021, as approved by the Order.

DEF'S Storm Accounting Processes and Controls

26. In their pre-filed testimonies, Mr. Cutliffe and Mr. Williams provide a general overview of the total transmission and distribution storm-related costs. Mr. Foster explains, in his pre-filed testimony, how DEF will handle any final over or under recovery amount. Further detail regarding each category of costs incurred by DEF as a result of Hurricane Dorian and TS Nestor and the manner in which such costs were calculated is provided in Mr. Morris' pre-filed testimony.

27. As detailed in Mr. Morris' pre-filed testimony, DEF's actual storm restoration costs of $144.56 million were calculated in accordance with the ICCA methodology required by Rule 25-6.0143, F.A.C., and where possible, with the 2017 Settlement approved in Order No. PSC-2017-0451-AS-EU. These costs, plus estimated interest and regulatory assessment fees[5] gross up of $0.5 million, total $145.0 million sought for recovery as Recoverable Storm Costs. For the months March 2020 through August 2020, DEF has calculated interest for the unrecovered storm restoration cost based on the monthly commercial paper rate consistent with the rate utilized each month in the fuel recovery clause. For September 2020 forward, the August 2020 rate was kept constant.

28. Mr. Morris describes how DEF tracked, recorded, and accounted for storm costs during and after the storm. A key component of Mr. Morris' testimony is his explanation of the processes DEF has in place to ensure costs assigned to Hurricane Dorian and TS Nestor are in fact attributable to those storms. DEF's accounting records thoroughly track all storm restoration costs charged to DEF and the Company's payment of those charges.

[5] *See* Order No. PSC-2020-0058-PCO-EI allowing incremental restoration costs including interest and regulatory assessment fee gross-up.

Determination and Implementation of Storm Cost Recovery

29. Pursuant to this Commission's Order No. PSC-2020-0058-PCO-EI, DEF began recovery of storm costs in March 2020 and will continue to do so through February 2021 or until costs are recovered, whichever is earliest.

30. As of the date of this filing, the Company has not yet finalized payment of all contractor services related to Hurricane Dorian and TS Nestor. The Company reserves the right to file supplemental schedules with any necessary adjustments with the Commission as appropriate.

Conclusion

Wherefore, DEF respectfully requests that the Commission (a) determine that DEF's actual Recoverable Storm Costs amount of $145.0 million, which includes recoverable storm restoration costs of $144.56 million plus interest and regulatory assessment fee gross-up of $0.5 million, were prudently incurred; (b) approve DEF's recovery of such Recoverable Storm Costs is in accordance with the 2017 Settlement and Order No. PSC2020-0058-PCO-EI; and (c) approve DEF's proposed true-up of any final over or under recovery amount.

Respectfully submitted,

/s/ Daniel Hernandez

DANIEL HERNANDEZ
Florida Bar No. 176834
MELANIE SENOSIAIN
Florida Bar No. 118904
Shutts & Bowen LLP
4301 W. Boy Scout Blvd., Suite 300
Tampa, Florida 33607
T: 813- 229-8900
F: 813-229-8901
E: dhernandez@shutts.com
E: msenosiain@shutts.com

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC.
299 First Avenue North
St. Petersburg, FL 33701
T: 727.820.4692
F: 727.820.5041
E: Dianne.Triplett@duke-energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 East College Avenue, Suite 800
Tallahassee, Florida 32301
T: 850.521.1428
F: 727.820.5041
E: Matt.Bernier@duke-energy.com

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR LIMITED PROCEEDING FOR RECOVERY OF INCREMENTAL STORM RESTORATION COSTS RELATED TO HURRICANE DORIAN AND TROPICAL STORM NESTOR BY DUKE ENERGY FLORIDA, LLC.

FPSC DOCKET NO. 20190222-EI

DIRECT TESTIMONY OF JASON CUTLIFFE

SEPTEMBER 30, 2020

I. INTRODUCTION AND QUALIFICATIONS.

Q. Please state your name and business address.

A. My name is Jason Cutliffe. I am employed by Duke Energy Florida, LLC ("DEF" or the "Company"). My business address is 2166 Palmetto St, Clearwater, Florida.

Q. Please tell us your position with DEF and describe your duties and responsibilities in that position.

A. I am the General Manager of Emergency Preparedness for Customer Delivery responsible for DEF's annual hurricane season readiness, and when hurricanes strike, I serve as the Incident Commander for restoration.

Q. Please summarize your educational background and employment experience.

A. I hold a Bachelor of Science in Electrical Engineering from the University of Maine, MBA from the University of Richmond, and I am a licensed professional

engineer. I have held various engineering, operational, and leadership positions over a 34-year electric utility career.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?

A. I am testifying on behalf of the Company in support of recovery of DEF's incremental storm-related costs incurred due to Hurricane Dorian and Tropical Storm ("TS") Nestor. I will begin by providing an overview of the total distribution storm-related costs and cost categories. I will discuss the operation of the Company's storm plan as it relates to DEF's distribution system, including the Company's goals and priorities as it prepares for, responds to, and recovers from a storm's impact on its distribution facilities. I will conclude my testimony by describing DEF's successful efforts at implementing its plan in response to the storms and, ultimately, to restore electric service safely and efficiently to its customers.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. I am sponsoring the following exhibits to my testimony:

- Exhibit No. __(JC-1) – Case studies of utility storm responses involving the pre-staging of restoration personnel
- Exhibit No. __(JC-2) – NHC Forecast tracks for Hurricane Dorian
- Exhibit No. __(JC-3) – Hurricane Matthew and Dorian 72 hour forecast tracks
- Exhibit No. __(JC-4) – NHC Forecast track for Tropical Storm Nestor and NWS Tornado map

Q. Please summarize your testimony.

A. Hurricane Dorian

Hurricane Dorian made devastating landfall in the Bahamas as a Category 5 hurricane with sustained winds of 185 miles per hour and gusts over 200 miles per hour. In the Bahamas, Hurricane Dorian killed approximately seventy people, caused an estimated $7 billion of damage, damaged or destroyed approximately 13,000 homes, and left approximately 70,000 people homeless.

On August 28, 2019, the entire state of Florida was in Hurricane Dorian's cone of uncertainty. Governor DeSantis declared a state of emergency for twenty-six Florida counties and expanded it to the entire state the following day. On August 31, a tropical storm watch was issued along Florida's east coast from Deerfield Beach to Sebastian Inlet and on September 1, a hurricane watch was issued for Deerfield Beach, Volusia County, and Broward County. The hurricane watch was upgraded to a hurricane warning that same day. DEF remained ready to respond to the Category 5 storm.

DEF activated its Incident Command organization on August 28, 2019. Restoration resources were acquired and pre-staged to support restoration from an expected Category 5 hurricane direct impact to Central Florida. Over the following days, resource plans were adjusted in response to changing National Hurricane Center ("NHC") forecasts. On September 4, when it was just ninety-five miles off the coast of Daytona Beach, Hurricane Dorian made a gradual turn northward and

proceeded up the Florida coast. Once it became clear that Florida would be spared from Hurricane Dorian's destruction, DEF released all remaining Mutual Assistance resources to support other electric utilities or to return to their home locations.

Florida's coastline sustained winds estimated to have reached upwards of sixty miles per hour from Hurricane Dorian. Additionally, central Florida sustained winds above thirty-nine miles per hour. Approximately 24,000 DEF customers in central Florida were restored from damage caused by Hurricane Dorian's winds.

Tropical Storm Nestor

On October 19, 2019, Tropical Storm Nestor hit the Florida panhandle near St. Vincent Island. Maximum sustained winds were forty-five miles per hour with wind gusts of sixty-one miles per hour, but TS Nestor's main legacy was five tornados that touched down in or near DEF service territory causing 709 outage events affecting 41,669 customers.

Q. Did DEF comply with the Storm Restoration Cost Process Improvements included as part of the Storm Cost Settlement Agreement in Order No. PSC-2019-0232-AS-EI ("Agreement") when calculating costs for Hurricane Dorian and TS Nestor?

A. The Agreement's provisions and process modifications did not take effect until the 2020 hurricane season. However, for Hurricane Dorian, DEF made best faith efforts to implement the Agreement's cost saving measures including GPS tracking

for off-system crews traveling to and from Florida, a 5-hour limit for mobilization preparation time, mobilization/demobilization pay limited to hours worked, and caps on meal reimbursements. Additionally, in the restoration phase, DEF was prepared to implement daily timesheet approval, limit pay to hours worked, limit work to maximum 16 hours per day followed by 8 hours rest, restrict meal and fuel reimbursements when provided by DEF, and require documentation for exceptions to meal and fuel provisions.

III. THE COMPANY'S DISTRIBUTION STORM PLAN AND ITS EXECUTION DURING THE 2019 STORM SEASON

Q. Please describe DEF's distribution system storm plan.

A. DEF prepares for major storms year-round. Hurricane season readiness begins several months before the start of the season and includes training, drills, and implementation of lessons learned from the prior year. DEF's comprehensive storm plan is modeled on Homeland Security's Incident Command Structure ("ICS") and incorporates the best practices the Company has developed from experiences with past storms. The ICS affords rapid scalability in response to a specific threat.

The scalability of ICS is reflected in DEF's three distinct levels of restoration response. Level 1 is for restoration events lasting 6-12 hours, Level 2 is for 12-24-hour events, and level 3 is for major events exceeding 24 hours and is designed for restoration on the scale of a hurricane. The same basic functions are performed at all storm levels, but as resources increase to match the storm's anticipated threat,

the organization expands to ensure efficient restoration of the Company's system. While it is appropriate for an individual in a lower level event, to perform parts of several storm roles, those same roles are broken out and staffed by an increasing number of dedicated resources as the scope of restoration work increases. The decision to activate at a particular response level is made by the storm management team, and is guided by weather forecasts, resource modeling and expected restoration duration. The flexibility of the storm plan is such that, for any given restoration event, DEF may have an area operating at Level 2 while another area is activated at Level 3. This allows areas within the Company operating at a lower restoration level to finish sooner and release resources to work in regions operating at higher restoration levels.

The ICS plan is built upon three phases of storm restoration: (1) pre-storm activation, (2) outage repair and restoration, and (3) returning the distribution grid to normal. Pre-storm activation begins as early as 120 hours prior to landfall, and includes detailed weather forecasting, modeling of potential damage and resource requirements, and preparation for support of logistics needs. The outage repair and restoration phase includes operational activities after storm impact to restore service to all customers capable of receiving it. Returning the grid to normal is necessary to restore DEF's electrical infrastructure to its pre-hurricane condition.

Q. Can you please describe the different roles within DEF's storm plan?

A. Yes. Within the storm plan there are a multitude of roles that facilitate an efficient restoration process. These roles are organized along five functional lines:

(1) Operations (restoration of service);

(2) Planning (forecasts, modeling, damage assessment, and situational awareness);

(3) Logistics (staging, material, and supplies);

(4) Governmental Liaison (coordination with state and county Governmental Agencies); and

(5) External Communication (outreach and communication to customers, community leaders, and media).

Personnel are assigned roles under the storm plan that may differ from their regular daily responsibilities and, as a result, it is imperative that they are effectively trained. This training is normally completed in the second quarter of each year throughout the Company and within each of the functional areas of responsibility. To further ensure storm preparedness, DEF conducts storm readiness drills to test the effectiveness of the training program and employees' ability to execute their assigned storm roles. DEF's storm restoration plan is coordinated with the state-wide storm preparedness efforts through participation in the state Emergency Operations Center ("EOC") coordinated storm drill conducted each May.

Q. When and how do you activate your ICS major storm organization?

A. DEF's formal ICS activation process kicks off as soon as a threat is identified, which is typically 72 to 96 hours prior to forecasted landfall. DEF's initial focus is to ascertain the most detailed weather information available including date, time, and strength of the storm, path, size and wind fields, precipitation, and exact time

when wind is anticipated to diminish and fall below 39 mph (DEF's limit for safe travel).

At 48 to 72 hours, DEF uses storm modeling tools to predict the amount of damage to DEF's system, where that damage will likely occur, and the quantity of resources required to quickly restore outages. Also considered are potential forecast variables including track and intensity changes, early hurricane arrival, and when travel conditions will deteriorate effecting travel to the DEF mustering locations. More specifically, the modeling tools estimate the number of personnel required, such as linemen, tree trimmers and damage assessors, providing the Company an estimate of the necessary scale of restoration response. At this point, efforts are focused on notifying DEF customers and employees of potential impact, and beginning storm readiness activities and initial efforts to acquire resources. A progression of pre-landfall checklists is followed to ensure orderly preparation each day thereafter.

Q. How does DEF use the information from predictive hurricane damage models?

A. Once DEF has estimated the amount of resources required and where and to what extent each region within DEF's territory will be impacted, several processes begin in unison. DEF's Resource Management function secures commitments for restoration manpower and Staging and Logistics prepares to open mustering and base camp sites to receive them.

<u>Resource Management</u>

Resource Management first secures internal line and tree resource commitments from other Duke Energy jurisdictions. Internal Duke Energy personnel are available immediately and can be moved into forward positions to expedite restoration. Next, DEF contacts the Southeastern Electric Exchange ("SEE") Mutual Assistance Group to secure commitments from the participating companies for remaining resource needs. SEE Mutual Assistance is governed by an existing agreement between all participating utilities. Most Mutual Assistance utilities assess the impact of the storm on their systems and, hold resources until their utility is in the clear. Utilities not in the storm's projected path typically must travel from significant distances and must be activated several days prior to landfall.

Staging

Depending on the time, path, and confidence in the storm's expected impact, decisions concerning when committed crews are activated, paid to be mobilized, and sent to an off-site mustering location are made prior to landfall. To expedite the restoration process, DEF mobilizes crews to mustering sites located along Interstates 75, 4, and 95. Safety is the highest priority, so the sites ultimately used depend upon the path of the storm; DEF seeks sites as close as possible to expected damage without unnecessarily placing crews in harm's way. The number of crews mobilized and where they are mustered depends greatly on confidence in the weather forecast. Restoration is fastest when resources are pre-staged before driving conditions deteriorate.

Logistics

Concurrent with the acquisition of resources, DEF's Logistics function establishes a coordinated schedule to open mustering sites and base camps, and to secure anticipated lodging needs. The use of mustering sites allows the Company to validate rosters and crew compliments for billing; orient non-native crews to DEF's safety policies, switching practices, and technical specifications; and prepare crews for reassignment to a restoration base camp that accommodates truck parking, inventory storage, refueling, meals, and lodging.

Q. Is pre-staging restoration crews part of DEF's hurricane plan, and is the practice supported by industry experience and regulatory guidance?

A. Yes. About 24 hours before impact DEF focuses on pre-staging, which is an integral part of DEF's hurricane plan, a well-established industry best practice, and a hedge against uncertain hurricane forecasts (timing and location). When combined with strong logistics and operational procedures, acquiring resources prior to landfall reduces restoration time. Case studies across the utility industry are summarized in Exhibit No. __(JC-3).

Rebuilding and repairing the electric grid after a hurricane requires more resources than native staffing. Not only must the area of impact and extent of direct damage be considered, but also the hurricane's subsequent path that could affect travel to the state, access to damage, and availability of remaining resources. Securing, mobilizing, on-boarding, and strategically locating Mutual Assistance crews takes several days and must be initiated before weather impact is certain. Pre-staging

decisions are based on detailed forecast data and advanced modeling tools developed and continuously improved through years of experience.

Pre-staging reduces overall restoration days and total customer outage hours. During a hurricane state of emergency, communities suffer economic loss and deal with threats to public health and safety. For these reasons, DEF's primary objective in storm response is the safest, fastest, most transparent restoration managed responsibly from a cost perspective as required by Rule 25-6.044(3).

Pre-staging greatly improves the accuracy of Estimated Times of Restoration ("ETRs"). Accurate and early ETRs are vital to community first responders who are managing threats to public health and safety, and to customers who evacuated and are seeking to return home. ETRs are a combination of estimated repair man-hours and resources available to do the work. When available resources are in place and engaged in work, the resulting ETRs can be provided sooner and are far more accurate than when acquisition and mobilization uncertainties must be included.

Q. Did DEF successfully pre-stage resources ahead of Hurricane Michael in 2018? If so, please explain how this reduced overall restoration time.

A. Yes. DEF's mature logistics support enabled housing of crews east of the hurricane's forecasted track. Partnership with county and state road clearing crews contributed to opening travel as soon as possible for utility restoration workers and other first responders. The Assess, Isolate, and Restore ("AIR") process enabled Mutual Assistance crews to begin productive restoration work almost immediately.

AIR provides a means to restore circuit backbones in the first 24-48 hours after a storm passes. Energizing backbones yields many restoration benefits including the rapid identification of second stage fuse work locations where Mutual Assistance crews are most effective and can be immediately engaged. Analysis in Exhibit JC-1 shows that by prestaging resources instead of mobilizing after damage was certain, Hurricane Michael restoration times were shortened by at least 1-2 days.

Q. How does the Company on-board crews and what steps does the Company take to ensure that they are effectively utilized?

A. The Company on-boards newly arriving crews at staging and logistics sites where rosters are verified, and arrival times documented. Crews go through a detailed overview of Company safety rules and protocols, as well as information on construction standards. Once restoration begins, crews are assigned to Area Restoration Coordinators (ARC). The ARC is a key oversight role for managing work. ARCs assign their crews daily work packages that are prepared in advance and monitor progress of restoration. ARC's also review time sheets and provide feedback to the storm center about crew effectiveness. This information is used by Operations and Logistics during demobilization to sequence crew releases so that the costliest, least productive crews are considered for earliest release.

Q. How is DEF's resource plan developed?

A. Resource plan commitments must be made far enough in advance to allow mobilization to strategically place mustering sites. The timing of crew mobilization is based on getting resources into position before driving conditions deteriorate and

crew safety is endangered. The resource plan is continuously checked and adjusted as information becomes more certain. Adjustments can include both additions and releases of resources.

Predictive damage modeling provides a target number of resources and is the basis for Mutual Assistance requests. For Dorian, some committed crews were moved into position and strategically staged outside of the hurricane's path, while others were instructed to prepare for travel and await further instructions. The resource plan covers many risks including early hurricane arrival and increased strength (as Hurricane Michael quickly did in 2018, attaining Category 5 status at landfall), shifting of storm track, widening of wind field, tornados, and flooding. These risks are mitigated by the number of resources secured, skill type (e.g., line, tree, damage assessment), pre-position location, and if not pre-positioned, the influence of the hurricane on post-landfall highway travel. While these decisions are made, by necessity, with imperfect forecast information, the consequences of inaction are enormous and well-documented as shown in Exhibit JC-1 case studies.

Q. What occurs as the storm begins to impact DEF's service territory?

A. When the storm-force winds commence in DEF's service territory, the Distribution Control Center ("DCC") is in constant communication with the Energy Control Center ("ECC") and the Transmission storm center. The ECC gives both storm centers a thorough description of what transmission lines and substations are dropping out of service as the storm passes, giving the Company a real-time assessment of the location of the storm damage. Crews in the hurricane's direct

path shelter in place when safe to do so, while crews on the boundaries respond to emergency calls. The ECC and the Distribution and Transmission storm centers jointly establish restoration priorities and coordinate restoration strategies to maintain grid stability.

Q. What happens after the storm passes?

A. DEF's storm response has three main components: (1) governmental and EOC support and response; (2) statistical damage assessment; and (3) feeder backbone restoration. These three components enable local and state governments to respond to the storm's impact and allows DEF to both estimate the amount of storm damage actually incurred by the distribution system and begin restoration of the highest priority feeders.

DEF can promptly respond as local governments and county EOCs encounter issues that require immediate attention. These issues may involve, for example, support for road clearing teams, or removing a downed power line with police personnel standing by at the site. By having DEF personnel assigned to county EOCs, DEF can facilitate communication with various governmental agencies also at the EOCs, such as fire departments, to quickly respond to the site, take care of the downed line, and allow the government agency staff to pursue other critical assignments.

Concurrent with these activities, DEF rapidly assesses a statistically valid sample of its total facilities to validate the damage and associated resources that were predicted by the model, and to provide operations management more information

for determining the best restoration strategy. As part of pre-storm season preparation, DEF identifies segments of feeders and associated branch lines in each area served by an operations center that are representative of the overall network of feeders and branch lines for the local area. As soon as the storm winds drop below 39 miles per hour, damage assessment teams are activated to get a better understanding of the damage to the distribution system. The previously identified representative distribution line segments are assigned to damage assessment teams who are responsible for a pole-by-pole survey of those segments, to inventory the extent of damage incurred, and return damage information to be compiled and analyzed. Based upon the storm damage found in this representative sample, DEF extrapolates the amount of storm damage for the rest of the local distribution network and aggregates these assessments to get a system-wide storm damage estimate. These estimates are used to confirm damage and to adjust the pre-landfall resource mobilization plan as needed.

The feeder backbone process is a method by which DEF restores service and catalogues storm damage for further repair. This process is intended to quickly restore the feeder backbone through the operation of switches only, inventory sections of the feeder that DEF is not able to immediately restore, and identify devices off the feeder that are not in service. DEF begins planning for the AIR effort prior to the storm season when each of the local management teams prioritize the order of restoration for critical feeders within their jurisdiction. Highest priority is assigned to feeders that are crucial to the health, safety, and welfare of the general public.

Q. How is the restoration phase of the storm plan carried out?

A. At this juncture of the restoration efforts, DEF is beginning to deploy resources to the local operating areas to include them in the storm restoration plan. To efficiently use this first wave of resources, DEF assigns them to the storm damage that was identified through the feeder AIR process. This allows the Company to assign the first wave to the highest priority work on the most critical components of the distribution infrastructure. Based upon the information collected from the statistical assessment, including aerial storm damage assessments using drones and helicopters, information reported to DEF's outage management system, and the knowledge of local management, the management team has the information it needs to determine what feeders require detailed damage assessment. When the detailed assessment of a feeder segment is complete, the results of that effort are compiled into an associated work package. This work package allows DEF to effectively communicate the scope of the work to be done and further assists the Company in managing productivity expectations of line and tree crew resources. Additionally, the work package information assists local management in allocating resources and determining ETRs.

Q. How does the Company communicate information to its customers prior to, during and after a storm?

A. Before a storm, the Company issues news releases, posts social media information related to storm and safety tips, issues public service announcements, sends customers emails focused on preparedness, and proactively shares stories with the

media focused on DEF's preparedness efforts to inform customers. To address the needs of customers with medical or special needs, DEF conducts outbound call campaigns to ensure these customers are aware of pending severe weather and to prepare for potentially extended outages. The Company also launches a dedicated webpage focused on the specific storm event where the public can find news releases, safety tips, videos, restoration information and links to other valuable resources. Banners on the Company's main page direct customers to the storm and safety information and eventually to the dedicated storm webpage once it is launched. All pre-storm communications include storm and safety tips and instructions on how to report outages. DEF's proactive outreach to the media often results in interviews and stories focused on storm preparedness.

During a storm, the Company develops daily messages to be used with media, customers, and field personnel. The Company publishes daily updates via news releases and social media on various topics, including storm damage, ETRs, and out of town resources. DEF secures TV, print, and radio advertising to provide restoration updates. Customers participating in DEF outage communication programs receive updates via email, phone, and text on restoration progress and ETRs. Ongoing updates regarding storm restoration are also provided on the Company's dedicated storm page which includes updated outage maps. Furthermore, during a storm event, updates are continuously provided to elected officials, community leaders and other stakeholders to ensure that they have the information needed to share with the public and to plan accordingly.

After a storm, the Company prepares wrap-up messages to share with customers, community leaders, and other stakeholders. News releases are published to provide final outage-related numbers, thank customers for their patience, and thank local first responders, and thank the companies that provided off-system resources.

Q. Does the Company update ETRs during the restoration process?

A. Yes. DEF has three levels of ETRs: (1) an initial system level ETR; (2) a view of ETRs by city and county; and (3) device level ETRs. As the storm restoration progresses, DEF moves from higher level ETRs to increasing levels of detail, providing customers with immediate information. ETRs are continuously updated and expanded to greater levels of detail during restoration. Factors that influence ETR updates include integrating any new information the Company has collected; the extent and severity of the storm damage; the critical and priority restoration needs DEF may receive from ECC, state and local governments, and EOCs; and the availability of resources. Additionally, ETR's can be impacted by timing of resource arrival due to a number of external factors such as road and bridge closures, crews that have to travel through the path of the storm (after it has cleared), evacuee traffic, and lodging and fuel availability along major routes into the state. As required, DEF shifts line and tree crews, equipment, and material to address new priorities or to increase productivity. During restoration, DEF is constantly striving to improve ETRs and meet or exceed ETR goals.

Q. How does the Company wind down its restoration process?

A. As the Company nears the completion of storm restoration work within any part of the service territory, DEF begins demobilization efforts. DEF makes a best faith effort to use the most productive and cost-effective resources during restoration. As a part of the demobilization plan, DEF surveys local management and ARCs to determine their assessment on the productivity of the non-native line and tree personnel. Combining this information with the daily cost of the personnel, DEF builds a restoration plan that retains the safest, most productive, cost-effective resources until no longer needed.

Q. Is there anything else that must be done after restoration of customers is complete?

A. Yes. The final phase of hurricane response is restoration of the system to its pre-storm status. When in the storm outage restoration phase, DEF performs the essential work necessary to restore the fundamental operating characteristics of the distribution infrastructure. The initial primary focus is getting "lights on" and safety considerations rather than correcting all damaged facilities that are still capable of functioning. For example, during the storm outage restoration phase, DEF may leave in place poles that are damaged and in need of repair but are able to safely provide service to customers in the short term, capacitor banks and reclosers are returned to service only if immediately required, and animal mitigation hardware is not installed pursuant to DEF's day-to-day standards. After the restoration efforts are concluded, DEF conducts electrical and physical condition sweeps of the feeder backbone and identifies the issues that require mitigation to return the distribution system to its pre-storm state.

The Company also conducts a "tree sweep" which is a detailed vegetation patrol of the feeder backbones to identify any storm damage to trees that were not mitigated during the storm restoration phase. The tree sweep is focused on cracked or broken limbs that are tenuously hanging over-top of facilities and will eventually come down. Trained vegetation management personnel are responsible for identifying trees or branches damaged by the storm and immediately mitigating any such damage. This process requires considerable subject matter expertise because these issues can be camouflaged when the leaves are still green, meaning that only the most obvious can be easily identified.

Q. How do you measure the effectiveness of your storm planning and restoration process?

A. Beginning with restoration effectiveness, one of the main measures that the Company uses is the cumulative percentage of customers restored versus the projection of where DEF should be at the end of each day. Moving backward from DEF's final ETR goals, the Company sets milestones that must be achieved each day in order to achieve the overall goal. DEF generates these milestones down to the operations center level based on the amount of storm damage on DEF's system, the level of resources at the Company's disposal, and DEF's restoration history. This analysis tells DEF whether it is being as effective as it needs to be and, if not, helps to highlight or correct any issues that may be impacting the Company's performance.

Effective planning comes down to ensuring that the Company has the processes in place to provide maximum flexibility. Due to the nature of these storms, DEF will never be able to precisely predict the location and timing of the storms or the extent of damage they will create. It is more important that DEF's planning process ensures it has the flexibly to adapt to inevitable changes in the location, timing, and intensity of storms as they arise. In DEF's judgment, the planning process did in fact provide DEF with the needed flexibility to cope effectively with the hurricane season.

Finally, another critically important measure of effectiveness is safety; and in 2019 no serious injuries were recorded.

IV. INCREMENTAL COSTS INCURRED BY DEF AS A RESULT OF HURRICANE DORIAN

Q. Please identify what incremental costs the Company incurred in connection with Hurricane Dorian.

A. Incremental distribution storm-related costs incurred by the Company attributable to Hurricane Dorian are $136.2 million, as shown on Exhibit No.__(TM-2) in the direct testimony of Tom Morris.

Q. Please describe Hurricane Dorian and how you implemented the plan you described above.

A. Hurricane Dorian formed August 24th and gradually strengthened as it moved west, becoming the first major hurricane of the 2019 Atlantic hurricane season on August 28. Dorian quickly intensified into a devastating Category 5 hurricane with sustained winds of 180 mph and gusts over 200 mph. Initial track forecasts were influenced by a ridge of high pressure extending into the Southeast that steered Dorian westward toward Central Florida, where it would lift northward and stall, increasing the threat for significant rainfall and flooding in DEF's service area. DEF's territory remained within the NHC's forecasted cone of uncertainty from August 26, 2019, to September 2, 2019.

Dorian's timeline and DEF's response was as follows:

- August 28, 2019: The NHC forecast shown in Exhibit JC-2 brought the center of Dorian to Florida's east coast as a major hurricane, then into Central Florida, and eventually stalling and severely limiting travel into Florida from the north. DEF activated its ICS storm organization and began modeling possible resource needs. Over the next 48 hours, based on predictive damage models and the risks posed by Dorian, DEF began acquisition of approximately 7,500 line, tree trimming, and damage assessment resources. Mobilization dates varied based on travel distance and arrival at a pre-stage locations south of the track before deterioration of safe driving conditions. Due to the path of the hurricane and threat of stalling, arrival time for resources attempting to enter the state after landfall was highly uncertain.

- August 31, 2019: After rapid intensification Dorian became a Category 4 hurricane. The NHC forecast shifted Dorian's track to the east (Exhibit JC-2). Based on continuous assessment of forecast information and potential damage, DEF adjusted its plan by releasing approximately 3,300 resources.

- September 1, 2019: Dorian reached Category 5 intensity and made landfall in the Bahamas, with maximum sustained winds of 180 mph and gusts over 200 mph. The NHC continued to emphasize that users should not focus on the exact center track. A Hurricane Warning and Storm Surge Warning were issued by the NHC for portions of Florida's Atlantic coast. DEF remained well within the forecasted cone with the west edge extending inland to Orlando.

- September 2, 2019: The NHC stated that life-threatening storm surge and dangerous hurricane-force winds were expected along portions of Florida's Atlantic coast, and storm surge and hurricane warnings were in effect. Dorian weakened to a Category 4 and the ridge of high pressure steering the system collapsed, causing Dorian to stall just north of Grand Bahama and prolonged the uncertainty regarding potential Florida landfall. Only a slight deviation to the west of the official forecast would bring the core of Dorian near or over the Florida coast (Exhibit JC-2).

- September 3, 2019: After stalling just over 100 miles east of West Palm Beach, Dorian tracked north northwestward 80 to 100 miles from the

Florida coast. A land-based station at Cape Canaveral recorded wind gusts of 70 mph.

- September 4, 2019: Based on assessment of forecast information and expected damage, all remaining Mutual Assistance resources were released in the morning when it was determined that native crews could respond to the current threat. Dorian's wind and rain bands moved through DEF service territory (JC-2). Restoration of approximately 24,000 customers was completed.

Distribution assessed the resource plan multiple times per day after weather updates and damage model changes. However, the resource plan was affirmed except for changes noted above.

DEF strives to balance the expectation and responsibility to quickly restore service with overall cost. Specific to Hurricane Dorian, DEF successfully balanced these factors by preparing for the serious threat posed by the storm, releasing resources as the threat changed and it was prudent to do so, and swiftly responding to the damage caused by the storm.

Q. Please describe the Company's process for seeking Mutual Assistance from outside sources and identify the date on which the Company communicated with Mutual Assistance organizations with respect to Hurricane Dorian.

A. Once a tropical system is identified that threatens DEF's service territory, the process to acquire off system restoration personnel is activated. There are primarily

two avenues for acquiring off system support. The first is through non-Investor Owned Utility ("IOU") vendors using pre-negotiated agreements. DEF had over 90 vendor agreements in place prior to Hurricane Dorian. The second avenue for off system support is through the SEE Mutual Assistance process. Mutual Assistance calls are set up to assess resource availability from outside the projected impact area. Resources typically include linemen, vegetation management, damage assessment, support, and logistics personnel for both distribution and transmission restoration work. Depending on the projected event timing and intensity, the objective is to have resources mobilized and pre-positioned ahead of impact. Due to the time it takes for crews outside Florida to mobilize, this requires the Company to incur costs for off-system resources based on NHC tropical weather forecasts, which are subject to change. The Company's communications with Mutual Assistance organizations for Dorian began on August 28, 2019. Mobilization was based on travel distance and arrival at pre-stage locations south of the track before deterioration of safe driving conditions.

Q. When did the Company's Mutual Assistance costs for Hurricane Dorian begin to accrue?

A. Costs for Hurricane Dorian began to substantially accrue on August 30 and 31, 2019, as nearly 4000 crews were mobilized. Mobilization was based on travel distance and arrival at DEF mustering locations before driving conditions deteriorated to the point of being unsafe. As is industry standard, Mutual Assistance charging begins when the responding entities prepare to travel and work on DEF's system (examples include stocking material and preparing trucks and

equipment for highway travel). Although the Irma Settlement Agreement was not in effect in 2019, DEF's Scope and Method of Payment (SMP) agreements reflected many of its provisions including payment beginning only upon mobilization and pay during travel being limited to hours worked.

Q. Did the Company issue public announcements in connection with Hurricane Dorian?

A. Yes. To keep customers and the public updated on preparation and restoration efforts, DEF issued 5 news releases in English and Spanish. In addition, DEF published daily social media posts which covered several topics including safety, storm damage, resources, updated outage information and restoration progress.

DEF also issued public service announcements through local radio stations and pushed out messaging through media stories and other multi-media channels. In total, more than 3.2 million Residential and Business customer contacts were made through a combination of email, outbound calls and text messaging. The contacts consisted of:

- 1,650,497 emails sent;
- 329,916 outbound calls placed; and
- 1,241,085 text messages sent.

Q. When was the Company fully restored from Hurricane Dorian?

A. DEF was fully restored on September 4, 2019. Hurricane Dorian's outer bands began to directly impact DEF's service territory on September 1, and outage

activity continued through the morning hours of September 4, as Dorian's path paralleled the east coast of Florida as it traveled northward. A Hurricane Warning issued by the NHC was in effect for portions of Florida from September 1 into September 4.

Q. Does DEF have experience with recent hurricanes that compare to Hurricane Dorian?

A. Yes. As Dorian shifted east along Florida's Atlantic coast its track was comparable to Hurricane Matthew in 2016. Hurricanes Matthew and Dorian NHC track forecasts and cones-of-uncertainty at approximately 48 hours from closest Atlantic coast approach are shown in exhibit JC-4. At that point in time Hurricane Matthew was a Category 3 (sustained winds to 115 mph), Hurricane Dorian was a devastating Category 5 (sustained winds to 180 mph), and both cones-of-uncertainty extended inland to Orlando. The NHC 48 hour forecast period average track error in the Atlantic Basin is approximately 65 nautical miles.

Given that Matthew and Dorian's actual closest approach to Cape Canaveral was approximately 35 and 74 nautical miles, respectively, their forecasts presented comparable risk profiles for significant damage in DEF's Service Area. Hurricane Matthew's outer bands ultimately caused outages to over 316,000 customers and required replacement of 213 wood poles over 4 days of restoration.

Hurricane Dorian posed an enormous threat to Florida, and for days was forecasted to enter DEF service territory with possible major Hurricane force winds. After

devastating the Bahamas, Dorian's track shifted to the east and its most damaging impacts fortunately remained offshore as it moved north, sparing DEF and Central Florida from a direct impact, which would have resulted in significant harm and damage.

Based on DEF's prior experience with storms of this magnitude in Central Florida, preparation and acquisition of resources for Hurricane Dorian was reasonable and necessary in anticipation of the forecasted direct hit. A delay of these actions would have significantly hampered restoration of service to customers.

V. INCREMENTAL COSTS INCURRED BY DEF AS A RESULT OF TS NESTOR.

Q. Please describe your planning and response to TS Nestor and its impact on your system?

A. TS Nestor formed in the Gulf of Mexico on October 17, 2019. Weather forecast data and damage modeling indicated minimal risk of intensification or track shift, and that DEF could complete restoration safely and quickly with effective use of its employees, native line, and native tree trimming contractors. TS Nestor brought significant storm surge to the Florida Panhandle and spawned five NWS confirmed tornados in Pinellas, Hillsborough, and Polk counties (JC-2). The tornadoes toppled trees and damaged homes. The damage caused by TS Nestor impacted 41,669 DEF customers. By following DEF's scalable storm plan and efficiently moving native resources to areas of damage, off-system restoration crews were not necessary, and costs were minimized.

Q. Please identify what incremental costs DEF incurred in connection with TS Nestor.

A. The incremental distribution costs incurred by the Company in connection with TS Nestor are $0.1M, as shown on Exhibit No.__(TM-2) in the direct testimony of Tom Morris.

VI. CONCLUSION

Q. Do you have an assessment of the Company's implementation of its Storm Plan during the 2019 storm season?

A. Yes. I believe the strength of a storm plan is its flexibility to quickly adapt to changing conditions and enable action to prepare for a range of threats from major hurricanes to tropical storms. As such, DEF's advanced preparation and restoration efforts for Hurricane Dorian and Tropical Storm Nestor were reasonable, prudent, and absolutely necessary. The measures taken by DEF, especially for the potential impact of a devastating Category 5 hurricane, were requisite to meet its responsibility to minimize restoration times and mitigate public safety hazards.

Q. Does this conclude your testimony?

A. Yes.

Proactive Engagement of Mutual Assistance Crews to Restore Power After Major Weather Events

Case Studies

Contents

Introduction

The US is experiencing a greater number of extreme weather events requiring electric transmission and distribution companies to be prepared to respond safely, quickly, and prudently against ever-rising expectations from customers and regulators. One continually improving practice used to expedite restoration is mutual assistance; bringing foreign crews onto the system to increase the number of person-hours of work possible each day. The following document illustrates instances of successful implementation of mutual assistance as well as restorations that have received criticism for delayed requests for support resulting in longer outage times for customers and less accurate estimated times of restoration. Please note throughout this document "mutual assistance" is used, however, some sources referenced use the term "mutual aid" interchangeably. Similarly, the term "crew" can mean a vehicle staffed with several people but is used herein to mean an individual person.

The relative cost of acting early to bring in mutual assistance is small compared to the financial and other costs to customers. Mutual assistance is an investment against the societal cost of an extended outage. There is an expense of bringing assisting crews even if they go unused, but if the utility company is without assistance when needed, the risks quickly outweigh the expense. What is risked in such an investment if the hazard dissipates is outweighed significantly by the payoff of what is gained when mutual assistance is needed. Delay or hesitation in requesting mutual assistance prior to major events causes utilities to:

- Bring resources from further away since other utilities have secured those that may be in closer proximity,
- Remain without adequate number of crews for restoration,
- Extend overall outage duration to the customers (or portion of the customers),
- Not meet customer and regulatory commitments,
- Incur safety risks, and
- Create a negative economic impact for the communities they serve.

While some sudden events like earthquakes and derechos occur without warning, tropical storms typically develop offshore, providing utilities a several days' notice to prepare for a likely need for additional staffing. Recognizing the advantages of a timely restoration, public sentiment and regulatory guidance has moved in the direction of utilizing mutual assistance resources and positioning them ahead of time to get the restoration started quickly.

Mutual Assistance in Florida

Following Hurricane Irma in 2017, the FPSC conducted a review resulting in the report *Review of Florida's Electric Utility Hurricane Preparedness and Restoration Actions* published in the summer or 2018. The document includes discussions regarding the consideration of requesting mutual aid, pre-staging, and halting work until conditions are safe:

> "In an actual hurricane, utilities may initiate pre-staging meetings and activities as early as 240 hours before landfall which may include requests for mutual aid [assistance]. IOUs communicate with county EOCs to identify critical facilities (i.e., hospitals, water and wastewater treatment plants, and fire stations) and coordinate on other restoration activities.
>
> Before a storm makes landfall, an assessment of potential damage is completed by utilities based on the forecasted path of the storm. This information can be used to determine if mutual aid [assistance] and additional material resources should be requested.
>
> As the storm approaches, repair activities will continue until winds reach 35-40 miles per hour, at which time crews will be called back for a stand-down period. Once winds drop below 35-40 miles per hour and weather conditions are considered to be safe following a storm, utility crews are re-deployed to continue the restoration process."

Utilizing mutual assistance to bring staffing up to match extraordinary needs, and pre-staging them to be able to begin recovering quickly and safely from the emergency has been established and documented as the standard not only within the state of Florida but across the United States.

The Evolution of Mutual Assistance

Rapid restoration is more crucial and more challenging than ever before. In addition to a meteorological trend of major storms occurring more frequently, customer and regulator expectations are rising with increased dependence on electricity to support safe society, communications, business, and day-to-day life. Over the past decade, electric companies have adopted "lean management" strategies. These minimize the number of full-time employees within the company to minimize spend. Dependence on outside assistance has become the standard for facing major outage events.

With each successive major outage, the industry is exercising processes and procedures to enable quick and efficient restorations, drawing lessons from each event to share and refine the approach. Climate conditions have provided ample opportunity to learn over the last 30 years and approaches to restoration have evolved as a result.

In 1992, Hurricane Andrew hit Florida causing significant damage and interrupting power to 1.4 million customers. The restoration took months to complete.

Ice events in Quebec and the Carolinas in 1998 and 2002 took multiple weeks each to restore and were remarkable in that utilities across the US and Canada pooled resources to help the affected companies get back on their feet in four weeks (Quebec) and two weeks (Carolinas), respectively. The hurricane season of 2004 gave Florida ample opportunity to practice with hurricanes Charley, Francis, Ivan, and Jeanne. The quick restorations garnered support from the ratepayers and the age of Mutual Assistance had certainly arrived.

Between 2005 and 2016, there have been many opportunities to exercise mutual assistance and major restorations, establishing Regional Mutual Assistance Groups (RMAGs) to exchange resources. In 2013, the EEI created a National Response Event that established a process for utilities to share resources fairly after resource allocation challenges in Hurricane Sandy. Companies refined their approach to storm response, such as where to park trucks and house people, how to identify the scope of damage and keep valuable resources fully utilized, how to communicate accurate and useful information to customers, and how to do all of this safely and in a fiscally responsible manner.

By 2017, many utilities had developed mature processes, and Florida utilities in particular, were well versed in restorations. Following a relatively uneventful summer, hurricane Irma arrived and put Florida utilities to the test. Forecasts called for a strong system to run up the west coast of Florida, maintaining strength over the water while dragging strong winds along its right side along the coast of Florida. Utilities recognized the threat and secured resources but were faced with the issue of where to position them. The entire peninsula of Florida was threatened, with a slightly better prognosis on the Atlantic coast, as long as the storm did not shift east from its path. Uncertain about where to safely house crews, many waited just out of state or along Florida's panhandle for the storm to pass before proceeding to join the restoration effort. This proved more difficult than anticipated, as the state was evacuating people north and several roads were blocked or damaged. Duke Energy Florida (DEF) executed the largest single restoration effort in its history, and collectively Florida utilities brought 50,000 people into the state to help with restoration, which was completed in under two weeks despite the breadth and extent of the damage. Not having the resources in the right place to react quickly was identified as an area for improvement.

In 2018, DEF was faced with little advance warning for Hurricane Michael. Forming on October 7, it was forecast to clip the edge of DEF's service territory on October 10th. DEF monitored the system and began calling in mutual assistance support on October 8th. Heeding the lessons of Hurricane Irma, crews were directed to muster to the east of the storm's path and were able to begin movement toward the affected region after the storm passed on the afternoon of the 10th, getting to work on the morning of the 11th. Michael was restored within a week with the

exception of one coastal area that had to be completely rebuilt, and Michael was in fact a stronger storm at landfall than Hurricane Andrew 28 years prior.

Case Studies

The following includes several real-world case studies from the last two decades, describing the importance and challenges that utilities face in obtaining and managing mutual assistance in advance and during major storms. The focus of these case studies is on industry lessons learned and not on the specific utility's performance, therefore the names of the utilities and identifying details have been omitted.

Hurricane Katrina and Hurricane Rita

Certain forecasts for back to back hurricanes create an opportunity for pre-positioning crews

The Gulf Coast was hit by Katrina as a Category 4 hurricane with sustained winds of 140 mph. In its wake, less than a month later, Rita, a Category 3 hurricane left massive destruction, including major damage to the transmission system affecting several states.

The areas impacted by these storms overlapped putting utilities in competition for human and material resources. As the second storm, Rita, approached, availability of crews was low, thus responding utilities could only recover quickly by strategically pre-positioning the crews which allowed thin numbers of people to maximize their effectiveness.

In this instance there was never a question to pull in as much mutual assistance as possible, this restoration would require an army to rebuild the system. There was a high level of certainty in the forecast as these storms approached the service territory. An illustrative quote before landfall from Max Mayfield of the National Hurricane Center was, "There's certainly a chance it can weaken a bit before it gets to the coast, but unfortunately this is so large and so powerful that it's a little bit like the difference between being run over by an 18-wheeler or a freight train. Neither prospect is good."

The company was challenged to use all available crews to their best advantage. Pre-positioning them to increase efficacy was critical. The company sustained the worst damage of its system in history restoring six times as many outages as they had ever previously done. They brought in 16,000 workers to help restore power as quickly as possible.

The logistics of base camps, fueling, safety, and morale throughout the restoration were critical to utilize the 16,000 people working on the system to restore electricity. Thankfully, the company had pre-planned many of these logistics and contracts and were able to execute to the plan despite many hurdles including flooding, and outages of company facilities.

These camps were built to house, feed, fuel, and clean crews. Caterers prepared breakfast by six a.m. and packed box lunches for the crews to take out. Security was also a consideration given civil unrest and inoculations from mosquito-borne illnesses that were likely in the flooded areas. Communications systems were out of service making internal communications, customer communications, as well as vendors for invoicing was very difficult.

2011 Snowstorm

One utility was compared negatively to two neighboring utilities because they requested crews 3.5 hours later.

A major snowstorm hit the Mid-Atlantic region causing widespread outages across three neighboring utilities. Utility A secured internal crews to travel north plus 200 mutual assistance crews, and Utility B called for about 400 crews to assist by the afternoon before the snow began that evening.

Utility C held out on calling for mutual assistance until the evening as snow and ice was falling because the weather forecast had been uncertain and shifting. There was a strong possibility that there would be only rain and they did not want to call in crews they may not use and incur unnecessary costs. As the storm passed through the area, the worst possible weather under the circumstances materialized; windy with wet, icy snow weighing heavily on lines and overhanging tree limbs.

The media approach to covering the outage was to show outage numbers as a race between the utilities to restore, despite the fact that the storm hit each service territory differently, density of customers was different, roads cleared and other factors make it difficult to compare the utilities fairly.

Throughout the restoration, Utility C trailed the other two utilities while the media called out their lack of preparation related to delaying the decision to acquire off-system crews for assistance. Customers became irate as Utility C said they would have everyone restored by the evening four days after the storm cleared, and still had storm-related outages five days after the storm had cleared. Meanwhile Utility B was completed by the night three days after the storm cleared and Utility A in just two days.

In the wake of this storm and a subsequent major storm that materialized quickly, the commission requested studies to analyze what it would be required to restore any storm in one to four days. Owing to the sheer number of resources that would be required to restore major outages in very short timeframes, one runs into practical constraints of the number of

personnel that can be managed safely and kept productive in the field by a host utility, and that crews would have to be sourced from increasingly large distances as the size of the response increases, requiring decision making to pull resources well ahead of landfall when forecasts are uncertain. While utility customers have little appetite for outage events that take over a week to restore, it is generally understood that it is not practical to restore major outage events in much less than a week.

Hurricane Sandy

Utility implemented improvements from lessons learned

Hurricane Sandy followed by wintry weather caused 625,000 outages in this utility's service territory. Reports released by the US Department of Energy showed that this was the hardest area hit by the storm and one of the longest restorations taking a total of 12 days.

Sandy was the third record-setting storm causing significant outages in this company's service territory in two years. The company had received criticism and significant negative consequences from the commission as a result of the response to the first two storms. Based on the lessons learned from those storms, they were able to make major improvements to their response plan and implemented them in this response with much success.

In a post-storm assessment, the regulators found that the company had performed "in a generally acceptable manner" despite major system devastation. They praised the company for major improvements in communications to customers, government, and media. They recognized that the utility had challenges somewhat beyond their control to attain the mutual assistance they had requested.

The utility took steps to prepare and acquire resources ahead of the storm. They secured contractors and placed all internal personnel on-call. While they showed considerable effort to acquire mutual assistance, this storm hit a large section of the country, and many utilities were planning for the worst and pulling all resources available in advance of the storm planning to release them to other utilities if they were not required. Competition for mutual assistance was high. The utility was allocated approximately 2,000 crews they requested, but it came in from distant utilities, delaying their arrival time.

Hurricane Sandy

Utility attained and managed crews from 30+ states

Hurricane Sandy was forecasted to be strong, but the actual impact was even more significant than predicted. It devastated communities across the northeast including record-setting flood impacts and sustained high winds. 1.4 million customers of the utility lost power between this

storm and the snowstorm that struck just days into the initial restoration. This constituted four times as many outages as the utility had ever experienced.

During the two weeks that followed, the utility managed one of the largest restoration efforts in history. In addition to thousands of internal employees, they brought in external overhead and underground crews from 30 states and two Canadian provinces. A total external workforce of over 6,000 people worked on the system including base-camp mutual assistance workers, contracted electricians, damage assessors, and wire guards.

NY Scorecard

As a result of Hurricane Sandy, the New York Public Service Commission developed the reliability scorecard to objectively hold utilities accountable to a standard. These metrics establish minimum levels of performance to assess utility restoration performance against after significant outage events. Many utilities have been referring to these metrics to define success.

The scorecard assigns metrics and points to three categories: preparation, 150 points; operational response, 550 points; and communications, 300 points. Of the 1000 points available 60 are directly related to mutual assistance. At least 380 points (and arguably more) are not directly tied to mutual assistance but they will not be possible to attain without full staffing:

- Employees/Contractors planning – 15 points
- Participation in all pre-event mutual assistance group calls – 15 points
- Crew requests made within a specific time depending on length of event – 20 points

Other sections that may be affected by insufficient staffing if mutual assistance is not secured in a timely manner:

- Preliminary damage assessment completed within 24 hours – 30 points
- Publication of various levels of detail in ETRs – 150 points
- ETR Accuracy at various levels of detail- 120 points
- Zero injuries – 80 points

Hurricane Irma

Large storm causes massive damage, but restoration was off to a quick start with mutual assistance

Hurricane Irma made landfall true to forecasts as a Category 4 storm with sustained winds of 130 miles per hour causing widespread outages from. It brought extreme winds, storm surge, and tornadoes. The entire Florida peninsula was hit hard affecting approximately 50 utilities (including municipal utilities and co-ops) across the state.

The storm caused about three quarters (approximately 1.2 million) of Utility 1's customers to lose power. By mid-day of next day, 100,000 customers were already restored. Mutual assistance was critical for rapid restoration of power after this hurricane. In order to make progress this quickly, a workforce (internal and external) of over 9,000 crews were used.

Utility 2 notably ran a restoration using 28,000 people including internal and external crews. Across the state, there were an estimated 50,000 mutual assistance and contract crews from across the country helping to restore the system. Despite their success and speed in restoration, the utility has faced criticism that they had difficulty tracking the expenses of so many different crews. Utility 2 has since developed an app that will help the process of tracking costs. There were also comments that crews that had not been in place ahead of the storm had problems getting into the state due to storm debris and damage. It was noted that doing more pre-staging in the future and calling crews even earlier could mitigate the need to travel after the storm.

Hurricane Isaias

Several Major Utilities Under Investigation for Perceived Lack of Preparedness

Hurricane Isaias ran parallel to the coast of Florida and Georgia before making landfall in North Carolina, it accelerated up the east coast as a strong tropical storm. More than 3 million outages were reported as a result of the storm, most of which were in New Jersey, New York, and Connecticut.

In New York and Connecticut, regulators and elected officials have been critical of utilities' response to the outages caused by this recent storm. Customers were frustrated with outages lasting over a week with shifting estimated times of restoration (ETRs). Even though it was apparent that the storm damage was extreme, utility preparedness, planning, and storm hardening measures came into question.

Specifically, there has been criticism for the urgency shown in requesting mutual assistance as well as communication of restoration especially with ETRs for individual customers. As a result of the restorations, many utilities are under investigation to justify their level of preparedness for the storm. This could result in fines for the companies, restitution, or in some cases franchises being revoked.

Governor Cuomo was especially vocal in condemning the New York utilities claiming that this is another failure to prepare for a storm. He released a statement saying, "We know that severe weather is our new reality and the reckless disregard by utility companies to

adequately plan for tropical storm Isaias left tens of thousands of customers in the dark, literally and figuratively," Cuomo said in a statement. "Their performance was unacceptable."

The timing and urgency of requesting external crews by Eversource is being scrutinized. By the end of the storm, Eversource had brought more mutual assistance crews into their territory than for any previous storm. They cite that they experienced worse storm damage as a result of Isaias than from Sandy or Irene, but that the restoration was 33% faster than it was for those storms. Despite that, it is questioned whether they took the forecast seriously enough early enough to properly prepare.

A regulator stated that Eversource underestimated Tropical Storm Isaias as it approached, predicting it would cause half as many outages as it ultimately did, and leaving the utility unprepared to respond. Mid-restoration, Governor Lamont called for an investigation into Eversource and United Illuminating's handling of the storm, including their preparation ahead of its arrival, while pressuring the utilities to immediately scale up the number of repair crews working across the state.

Five days before the storm, Eversource communicated on a multi-company storm preparedness call that they anticipated no more than 375,000 outages. At that time, they did not request mutual assistance, as it would not have been needed for that level of storm damage. The forecast began to indicate that the storm might be more serious two days before impact, but that forecast was still uncertain. The severity of the storm in the Eversource service territory did not become certain until late, just one day before impact.

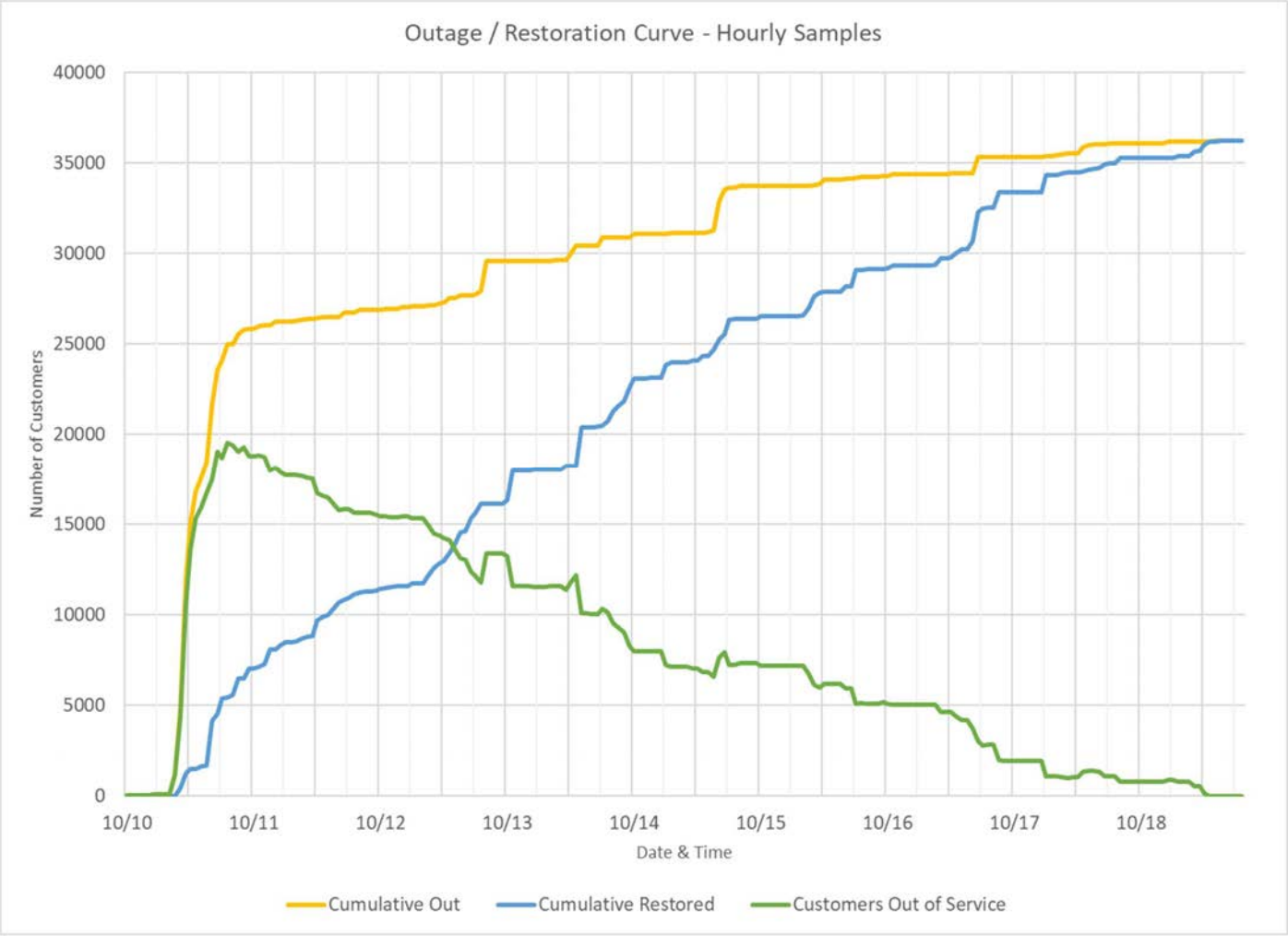
The response from elected officials and regulators also indicates that expectations for rapid restoration continue to rise. In response to the restoration, New York State Senator Joseph Addabbo said, "We need to see utility service as a right. Not a luxury but as a right." Customers around the Northeast were expecting ETRs as soon as the storm had cleared even though damage assessment was hindered by blocked roads and other storm damage. Utilities were unable to release ETRs until they knew their total resource count.

Scenario Analysis

The Impact of Mutual Assistance Timing

Major weather events generate a volume of work which far exceeds a utility's capacity to address all damage locations simultaneously. As illustrated by the yellow line below, the majority of outages occur as the storm passes through, but additional outages occur later, primarily due to weakened infrastructure or trees near the infrastructure. The many damage locations represent a volume of work required to repair lines and restore customers, and the pace at which the workforce consumes that fixed volume, represented by the blue line, is a

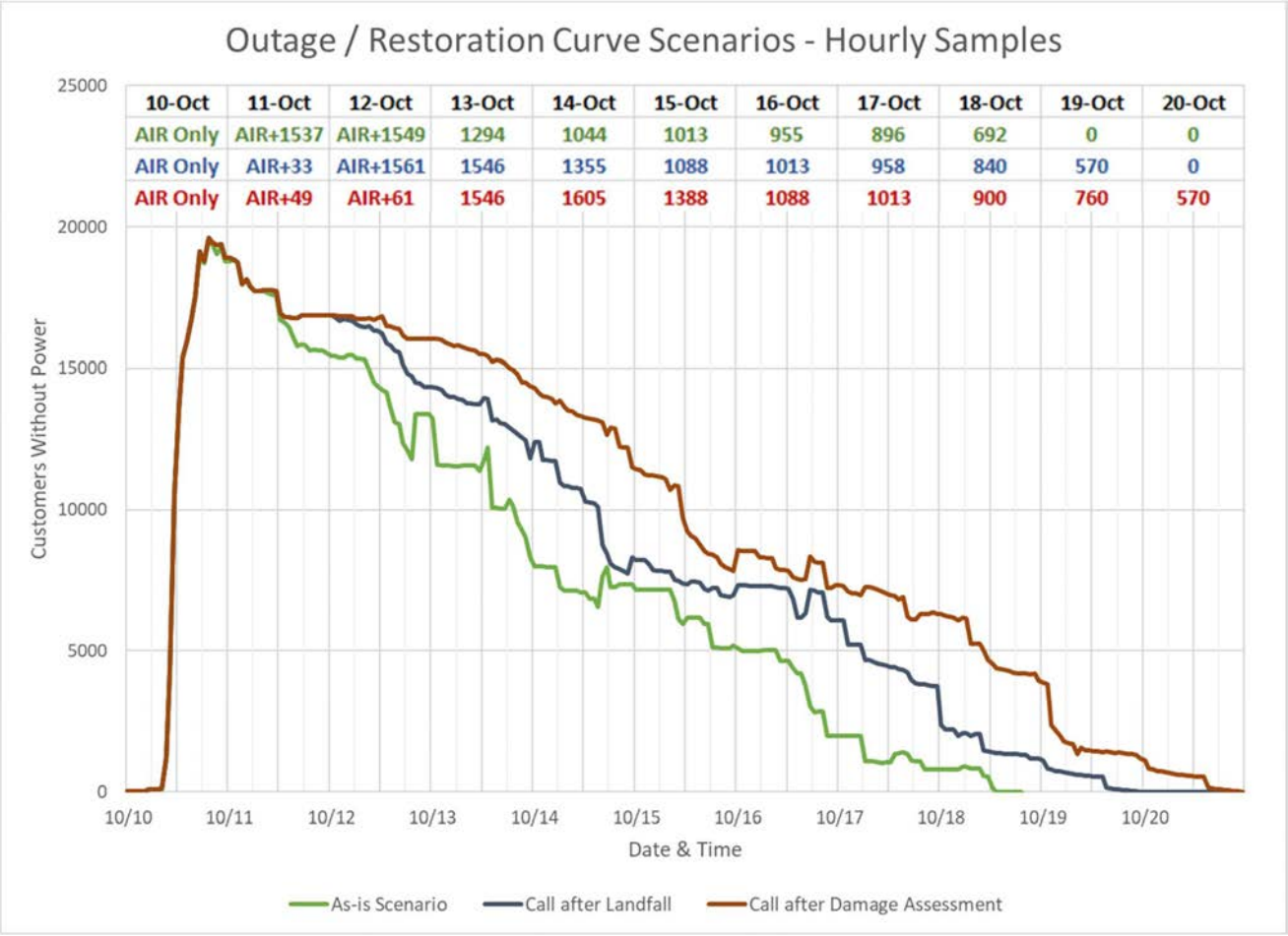
function of the size of the workforce and the support organization's ability to keep the workforce focused on productive work. The difference between these lines, represented by the green line, indicates the number of customers out at each point in time, with the height of the line showing the ongoing size of the outage, and the area under the curve representing the total customer hours of interruption.



The diagram above is the actual restoration curve for DEF following Hurricane Michael in October of 2018. The gains on October 11th are largely a function of DEF's AIR (Assess, Isolate, Restore) process which capitalizes on opportunities for quick restorations performed by DEF crews that do not require repairs, and sets the table for mutual assistance resources to perform restorations with a simplified safety process. Prioritization in the earliest hours of the restoration focus on energizing critical facilities such as water treatment plants and hospitals, and the types of services such as gas stations and big box stores that enable citizens to support themselves as the restoration is ongoing. These restorations, enabled by the AIR process, can be carried out by mutual assistance crews and are generally complete by the time outages

have been reduced by 25% from the peak. As these key facilities are brought back online, and as damage assessment data starts to flow in, work optimization shifts its focus to restoring the maximum number of customers per hour of wrench time, and for operational efficiency.

Pre-positioning mutual assistance resources ensures that DEF can make the journey to 25% of customers restored expeditiously. Using the restoration and workforce statistics from Hurricane Michael, following are two projected alternate restoration curves, 1) where DEF puts out the call for mutual assistance the morning of October 10 when they are absolutely confident that the storm will hit their territory hard, and 2) where they wait until the morning of October 11 when they have had the opportunity to perform an initial assessment of damage.



This analysis shows delaying the start of the largest portion of the workforce by one or two days extends the completion of the restoration by a similar amount. What is more significant, however, is the extension of the period between the outage peak and the restoration of the first 25%, along with the essential services that are typically covered in that critical period. Similarly, the overall impact of the outage in customer-hours is increased from 1.7 million to

2.1 million by waiting until the morning of the 10th to request resources, and up to 2.5 million by waiting until the morning after the storm hits.

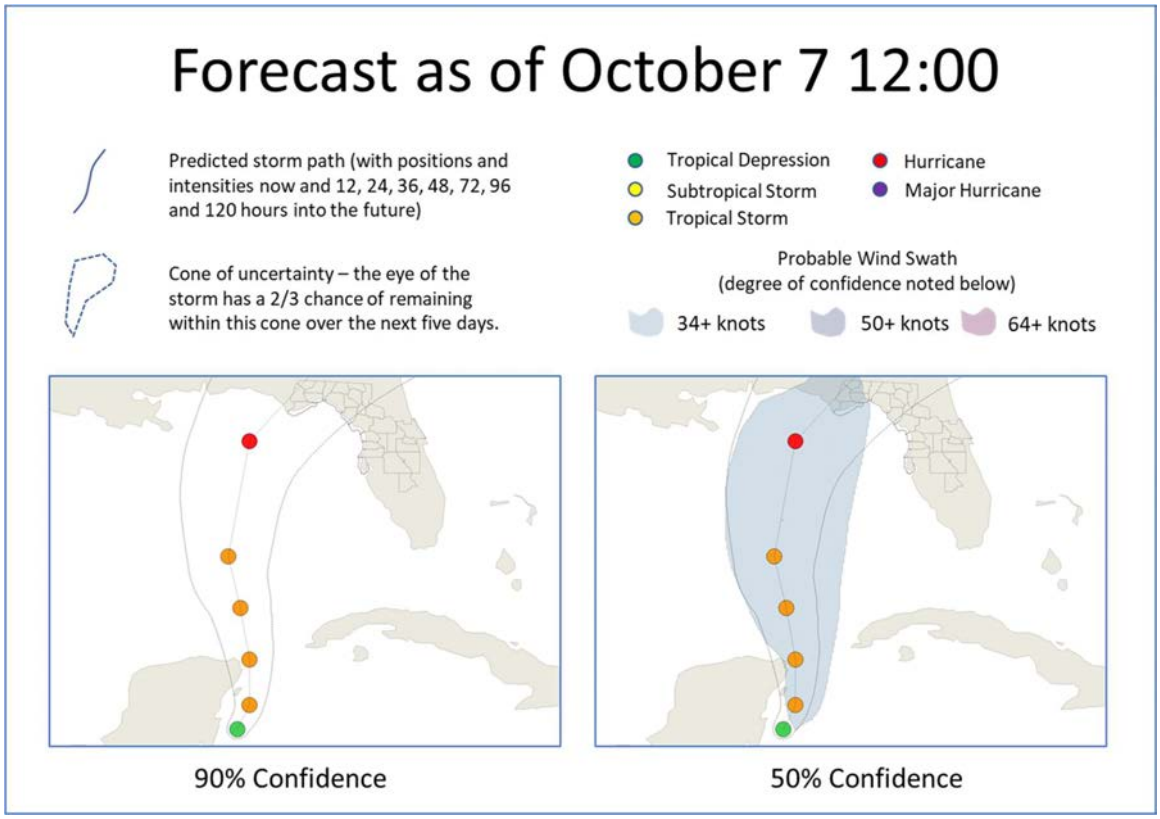
In addition to delaying key portions of the restoration, waiting for resources to arrive hinders utilities' ability to predict estimated times of restoration (ETR) with confidence. Calculating ETRs is a matter of estimating the amount of labor required to repair all damage locations and dividing that bulk total by the amount of available labor. Once teams are working in the field, planners can be confident about the amount of work they will produce. Before they confirm their availability, mobilize, travel through whatever conditions the storm has left behind, arrive at the staging areas, are onboarded and trained and ultimately deploy to their first assignment, it is very difficult to predict when they will start doing productive work. The diagram laid out above makes assumptions about the availability of labor, their travel time and congestion at the staging sites due to large volumes of arrivals in a small window of time. In all likelihood, the blue and red curves would be delayed even more than shown.

A final risk which is on the rise as storm seasons become more active is the possibility that a second storm arrives before the damage from the first is fully restored. Establishing priorities and executing a restoration efficiently with accurate ETRs and effective communications is a challenging endeavor at the best of times. The complication of executing two restoration efforts simultaneously is best avoided by getting each individual restoration complete as quickly as possible.

Consideration of Uncertainty in Forecasts

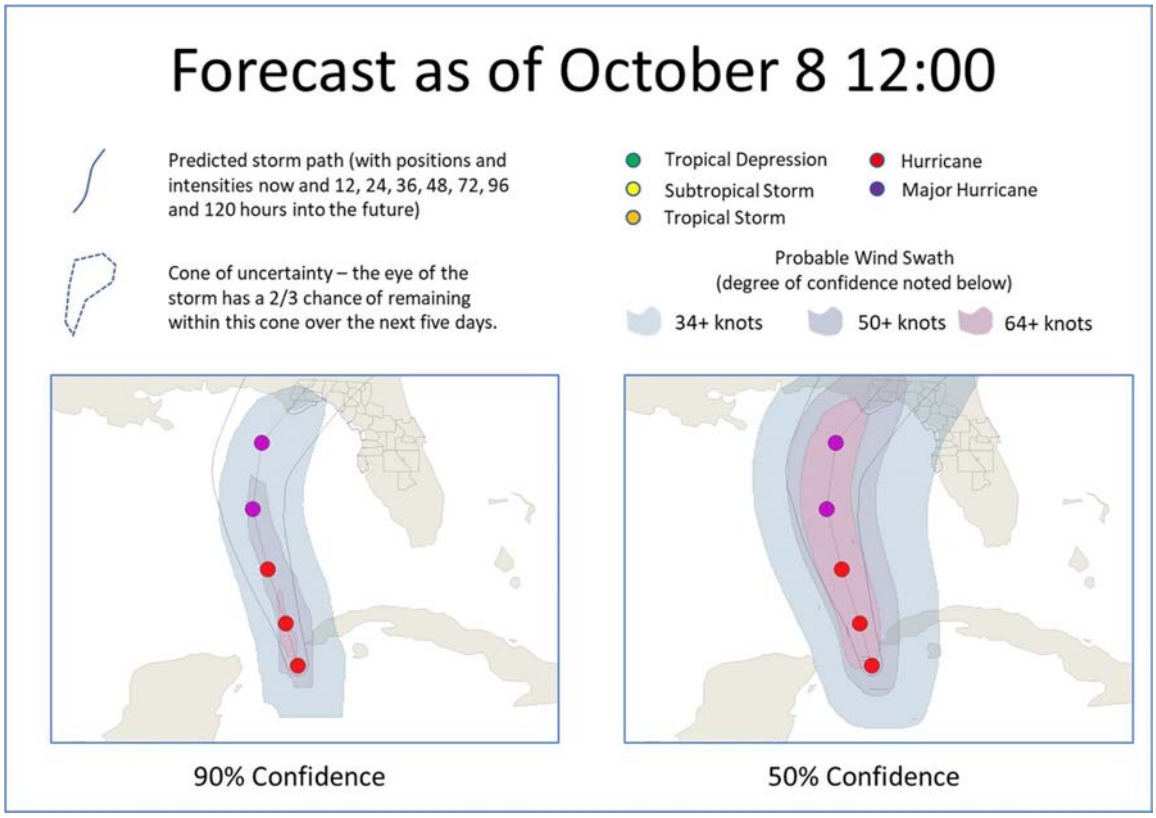
Planning for a tropical storm inevitably involves making decisions in the face of uncertainty. While several scientific models use the best data available to predict the formation, path, and intensity of storms, utilities need to make decisions using uncertain data in order to move crews safely into position to respond as quickly as possible. NOAA provides a range of forecast products, and DEF augments that with the services of staff meteorologists, but the confidence of forecasting diminishes with each day into the future it is looking, so DEF must make the most of incomplete information.

DEF knew definitively on the 10th of October that they would be hit by Hurricane Michael, but that is too late to begin positioning crews safely around the service territory. Looking back at the origins of the storm, the information available on the 7th of October was worthy of note, but by no means a guarantee of significant damage:



As of noon on October 7th, there was general consensus in the models that the newly forming storm would move north and gather strength to make landfall at hurricane strength around midday on October 10th. While this was the prediction, there was enough likelihood that the storm might move in a different direction or fail to gain the strength modeled, that there was only a 50% confidence that tropical storm force winds would reach the panhandle. Indeed, the system was only a tropical depression at that point.

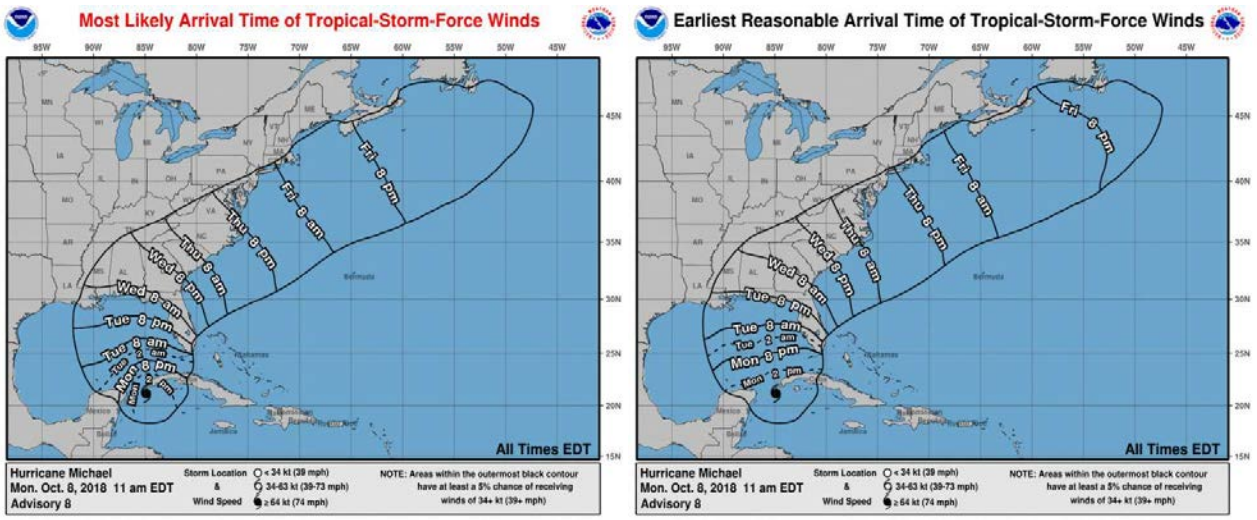
DEF's action at this point was to activate their watch office and form contingency plans for if the storm behaved in the way predicted. By the next day, the storm had reached hurricane force and was moving in the direction predicted. High winds hitting the panhandle in two days were predicted with greater confidence:



At this point, the storm was predicted to be a major hurricane before making landfall, and DEF knew with high confidence that they would experience at least tropical storm force winds and chances were that hurricane force winds would reach the coast. Having learned a lesson about the difficulty of moving crews after the storm, it was on this day the company put the call out for mutual assistance, so they could make the trip to the mustering points to shelter in place while the storm passed.

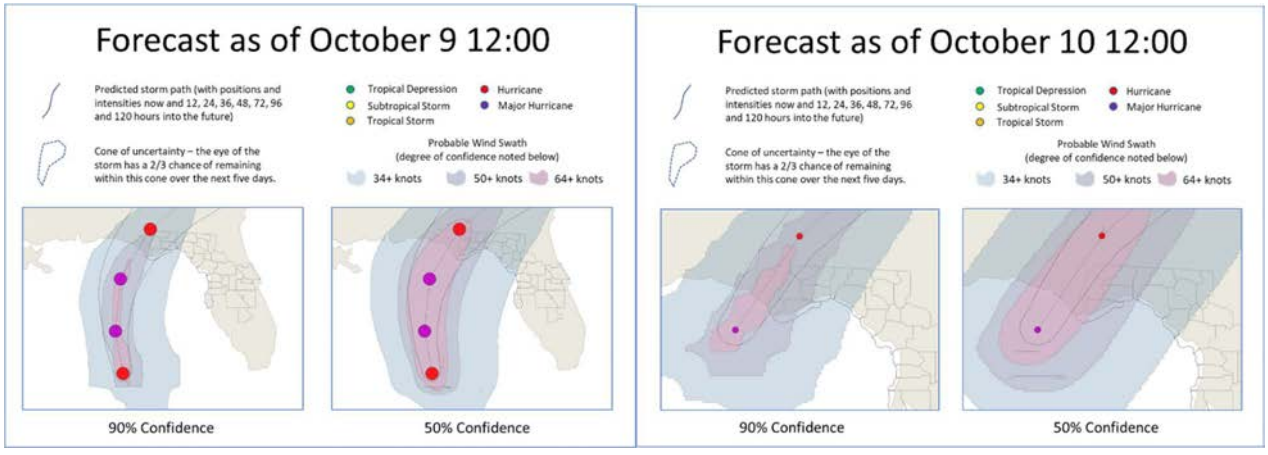
In addition to uncertainty about what would arrive on DEF's shores is the question of when. At the same time the forecasts above were available, the difference between the most likely time at which tropical storm force winds would reach land and the earliest they could reasonably be expected was approximately 12 hours. As was learned from the Irma experience, crews who do not arrive prior to landfall face slow and difficult driving conditions once the storm has passed through and wreaked havoc on the road system, which also may be commandeered for an evacuation in the opposite direction.

a

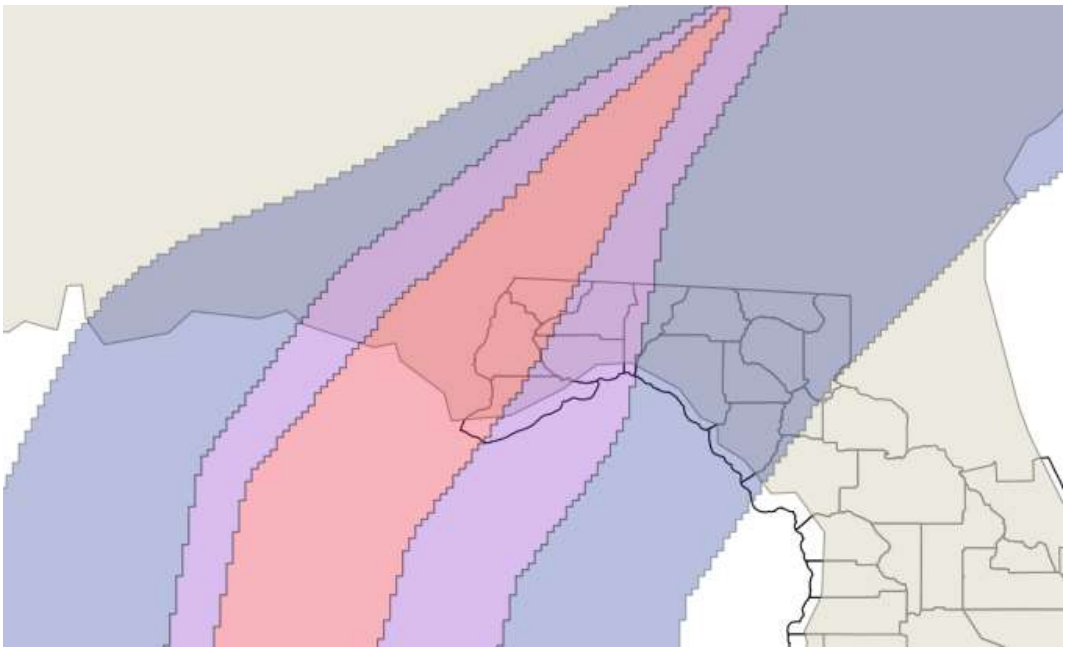


Crews traveled in from various locations to sites east of the storm's projected path with an aim of arriving before the storm to enable rapid deployment once the hazard had passed.

The storm proceeded as expected, and the confidence of the forecast for DEF's territory continued to reaffirm the original prediction of path and intensity, while the eye landed slightly later than expected.



In the end, while the 90% confidence maps alone provided DEF enough impetus to act, the 50% confidence maps, which are used to contemplate less certain but plausible scenarios proved to be fairly accurate in terms of what happened near the coastline. Where they came up short was how far inland the winds persisted, and the effects of that difference were felt well further north in the DEF service territory, as illustrated in this diagram of the actual swath that arrived.



Trends

Successful Mutual Assistance

The size and frequency of storms in the last 15 years has created a never-before seen need for mutual assistance on a large scale. Line personnel, vegetation management, various specialists, and other staff are needed to manage outage events to restore power as quickly as possible to meet rising expectations from customers and regulators. There are many instances of mutual assistance utilization where activation of outside crews has been a critical factor in the success of the restoration. In each of these cases, the decision to mobilize these crews needed to be made early for the crews to arrive safely before the storm, and in time to get to work as soon as the storm clears. The utility must take a calculated risk based on the best information available. Utilities are using advanced weather models, historical outage data, and pre-determined decision trees to inform these critical decisions.

Emergency management is a process of continual improvement. As noted in the Historic section above, the industry as a whole and individual companies have come a long way in maturing their mutual assistance processes and policies but opportunities for improvement can be seen in every new response. there is still room for improvement.

One uncompromising aspect of any restoration is the commitment to safety of all responders and customers. Electric work requires strict adherence to safety policies in the best of conditions due to the dangerous nature of the work. In a storm restoration, crews are working to get the job done quickly and with additional dangerous conditions including storm debris, temperature extremes, long work hours, and more. Despite all this, serious recordable injuries

are relatively low. In order to maintain safety for crews and the public the company must ensure they:

- Incorporate sufficient off-shift rest time in every day in reasonably comfortable accommodations;
- Use enough resources to complete the full restoration before reaching dangerous levels of fatigue;
- Enforce strict adherence to local safety protocols;
- Train mutual assistance crews upon arrival for local health hazards and familiarization with equipment, protocols, and safety policies;
- Allow sufficient time for rest while traveling long distances;
- Maintain control of crew activities and fitness for duty while riding out the storm; and
- Support crews with a logistics staff to have proper hygiene, food safety, and medical support.

Mutual Assistance Criticism

In recent years, more companies are making timely decisions, as their past experience and that of other companies have proven that failing to request adequate support, and not communicating specific, accurate and timely ETRs carries repercussions in the form of harsh criticism from customers, media, and regulators, and often resulting in penalties.

There is also pressure to ensure that spending is prudent. Events with less certain forecasts are creating situations where utilities must take a calculated risk to request mutual assistance. The costs of transporting crews, including their set up and break down time back home, transit time in either direction, and time spent on orientation and onboarding at the host utility are significant, and these costs are particularly difficult on the occasions where forecasts prove to be inaccurate.

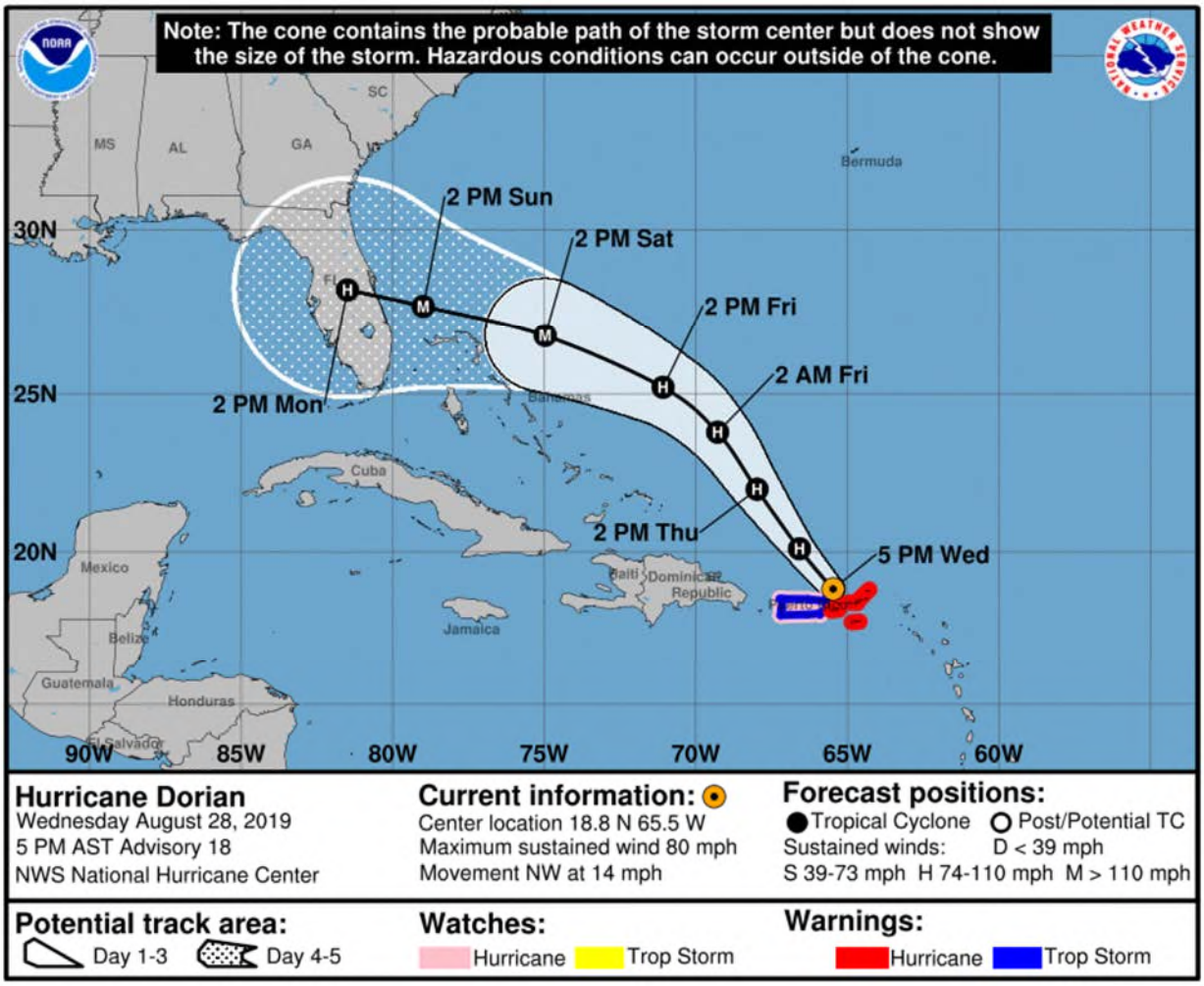
Alternatively, the consequences of delaying the mutual assistance are extensive and include the possibility that other utilities in the projected path of the storm will have already acquired the closest available crews, further decreasing availability of crews, while increasing cost and travel time. This ultimately delays customer restoration, creating additional hardship to the communities, and increasing safety and economic risks.

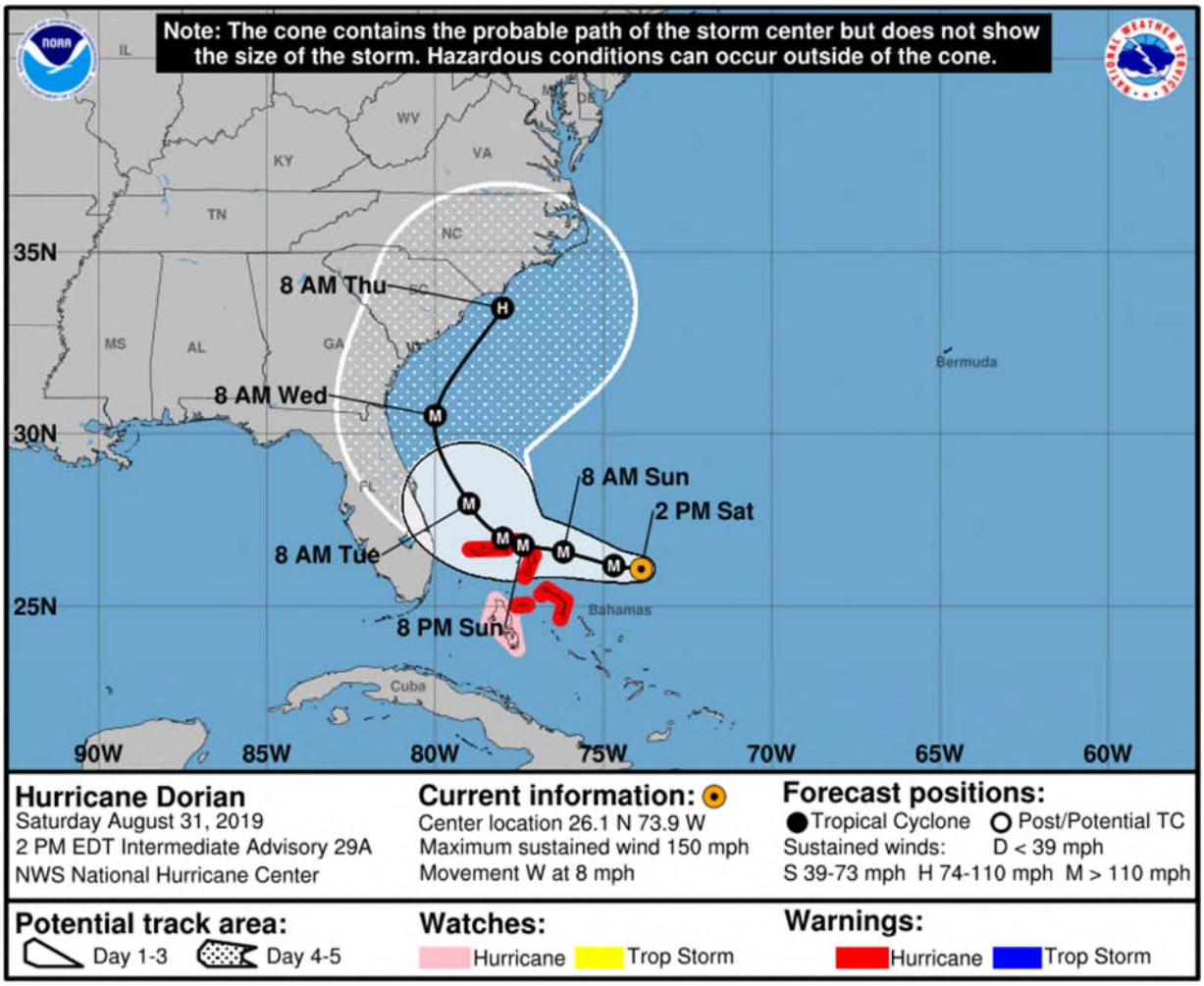
Conclusion

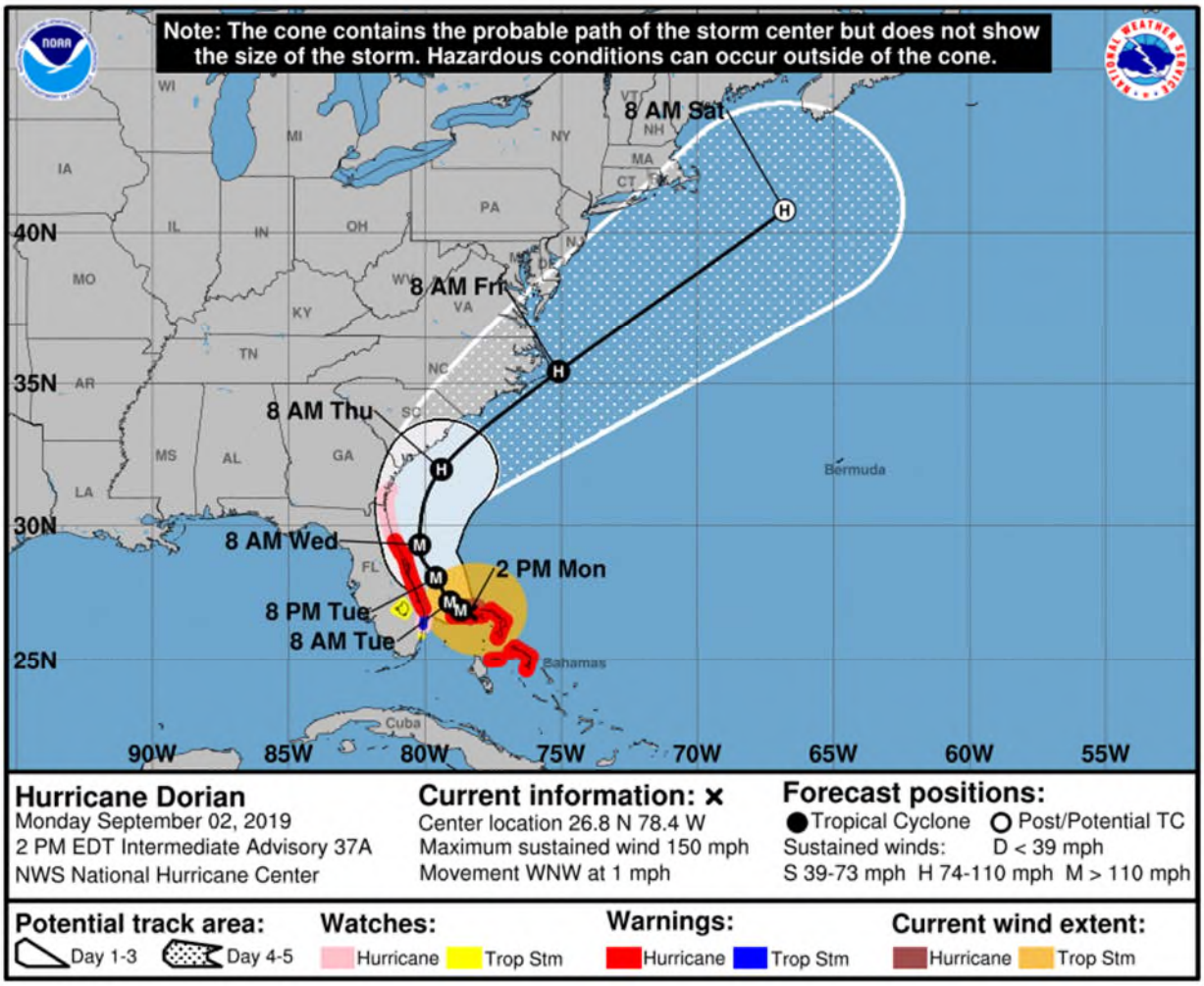
Customers rely on the resilience of the electric grid now more than ever from their cell phones to electric vehicles. People, business, and infrastructure rely on electric service for life-safety, income, security, comfort, and convenience. Utilities are tasked to make responsible choices to maintain reliable service for their customers when they face extreme weather or other hazards.

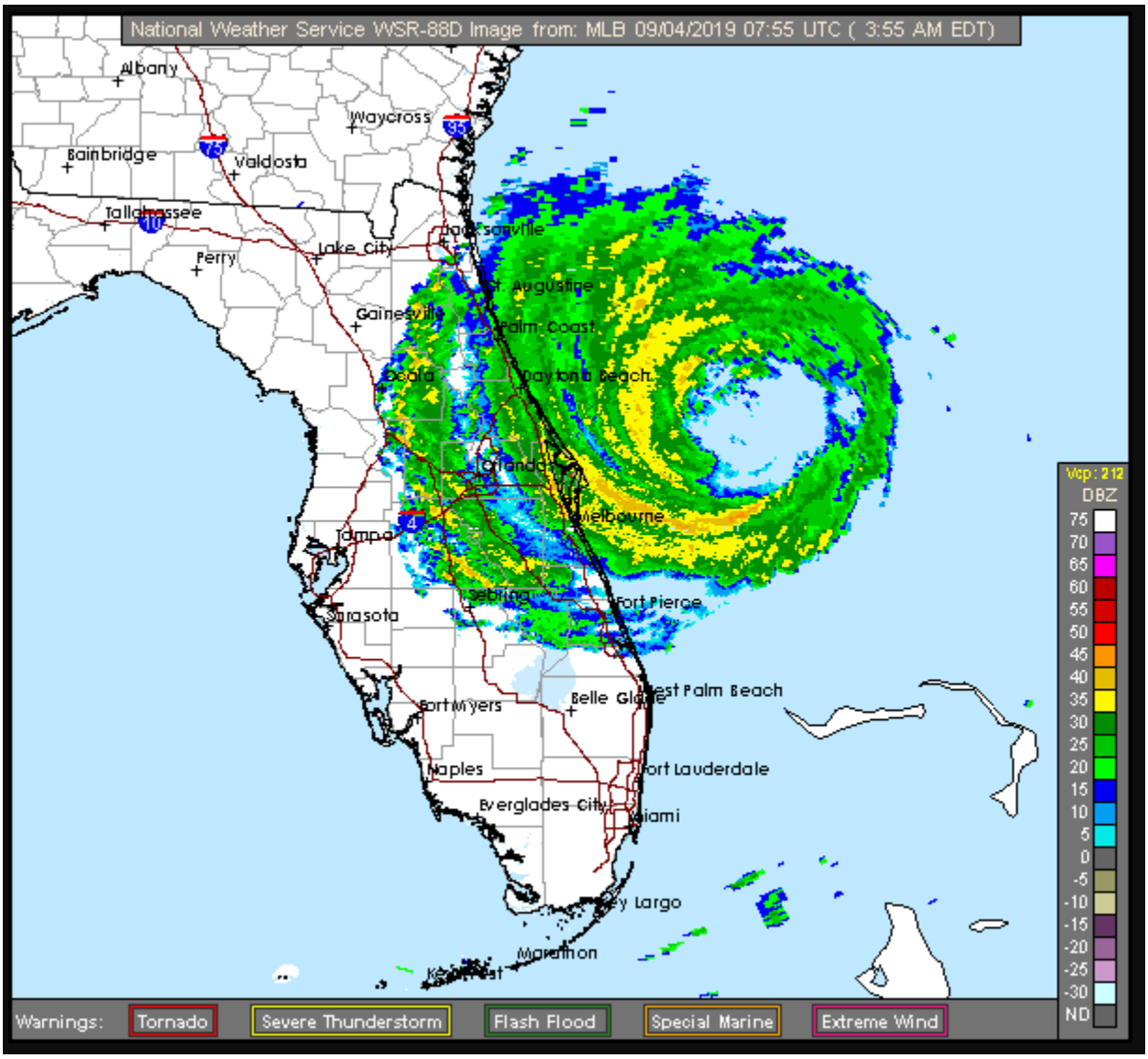
Mutual assistance is a proven method for accelerating the restoration power to customer from the damage caused by large events. For mutual assistance to arrive safely and in time to be most effective, decisions must be made early and based on predictions that are not 100% accurate. In order to make the best decisions possible for their customers, cost management is just one variable and must be balanced against the community's safety risks and economic hardships that are caused by delaying power restoration. While the company will use the best information available at the time to avoid unnecessary spending, the costs to customers may be significantly higher if mutual assistance was not requested in a timely fashion.

Regulators around the country have encouraged the use and advanced activation of mutual assistance process as a part of the effective overall storm response through actions and documentation such as the New York State Restoration Scorecard, and the *Review of Florida's Electric Utility Hurricane Preparedness and Restoration Actions* which are being used by the industry as a standard of performance.

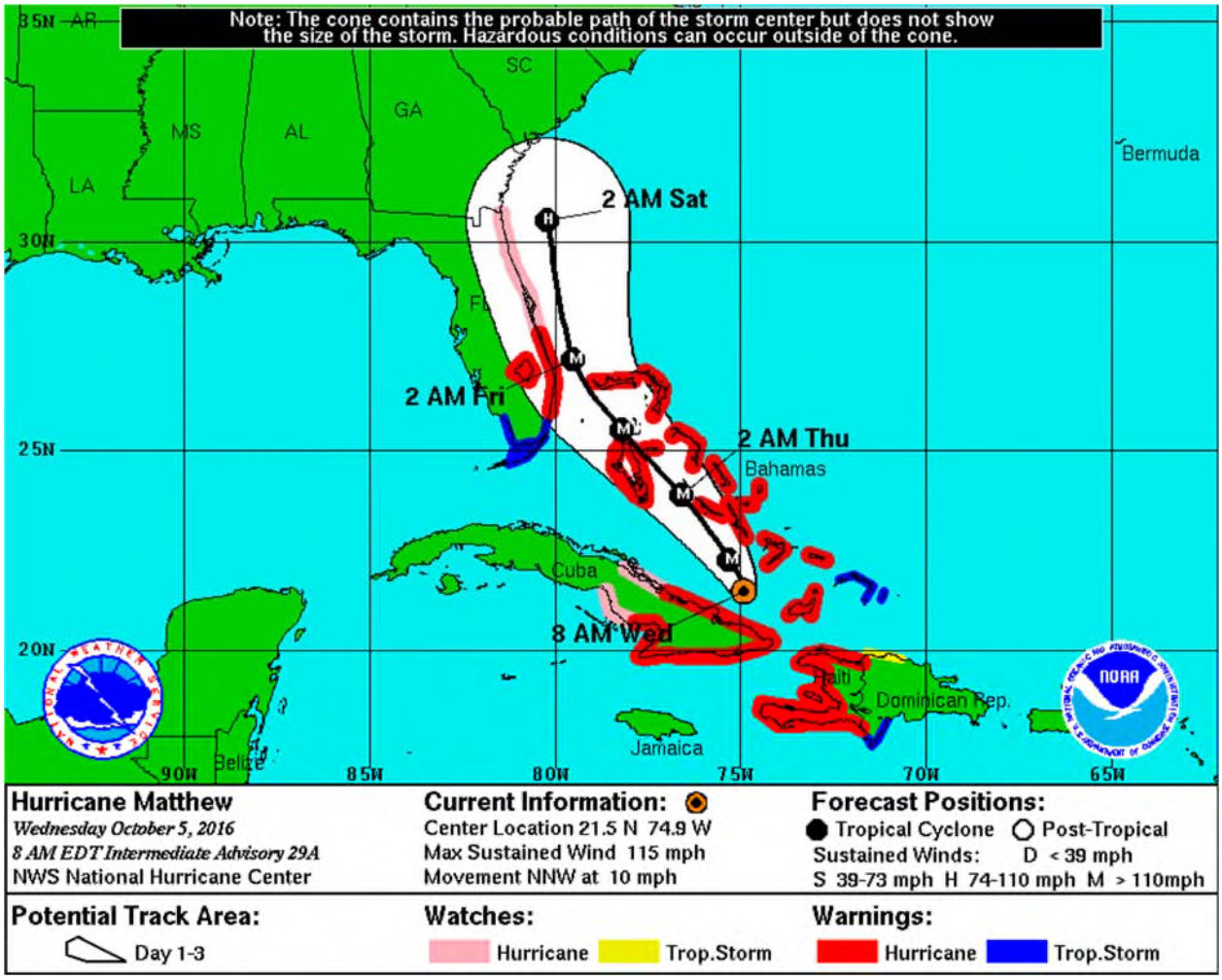

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
SC
MS
AL
GA
Bermuda
30N
25N
20N
2 PM Sun
2 PM Sat
2 PM Fri
2 AM Fri
2 PM Mon
2 PM Thu
5 PM Wed
Cuba
Bahamas
Haiti
Dominican Republic
Jamaica
Mexico
Belize
Guatemala
Honduras
El Salvador
90W
85W
80W
75W
70W
65W
60W
Hurricane Dorian
Wednesday August 28, 2019
5 PM AST Advisory 18
NWS National Hurricane Center
Current information:
Center location 18.8 N 65.5 W
Maximum sustained wind 80 mph
Movement NW at 14 mph
Forecast positions:
Tropical Cyclone
Post/Potential TC
Sustained winds:
D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph
Potential track area:
Day 1-3
Day 4-5
Watches:
Hurricane
Trop Storm
Warnings:
Hurricane
Trop Storm

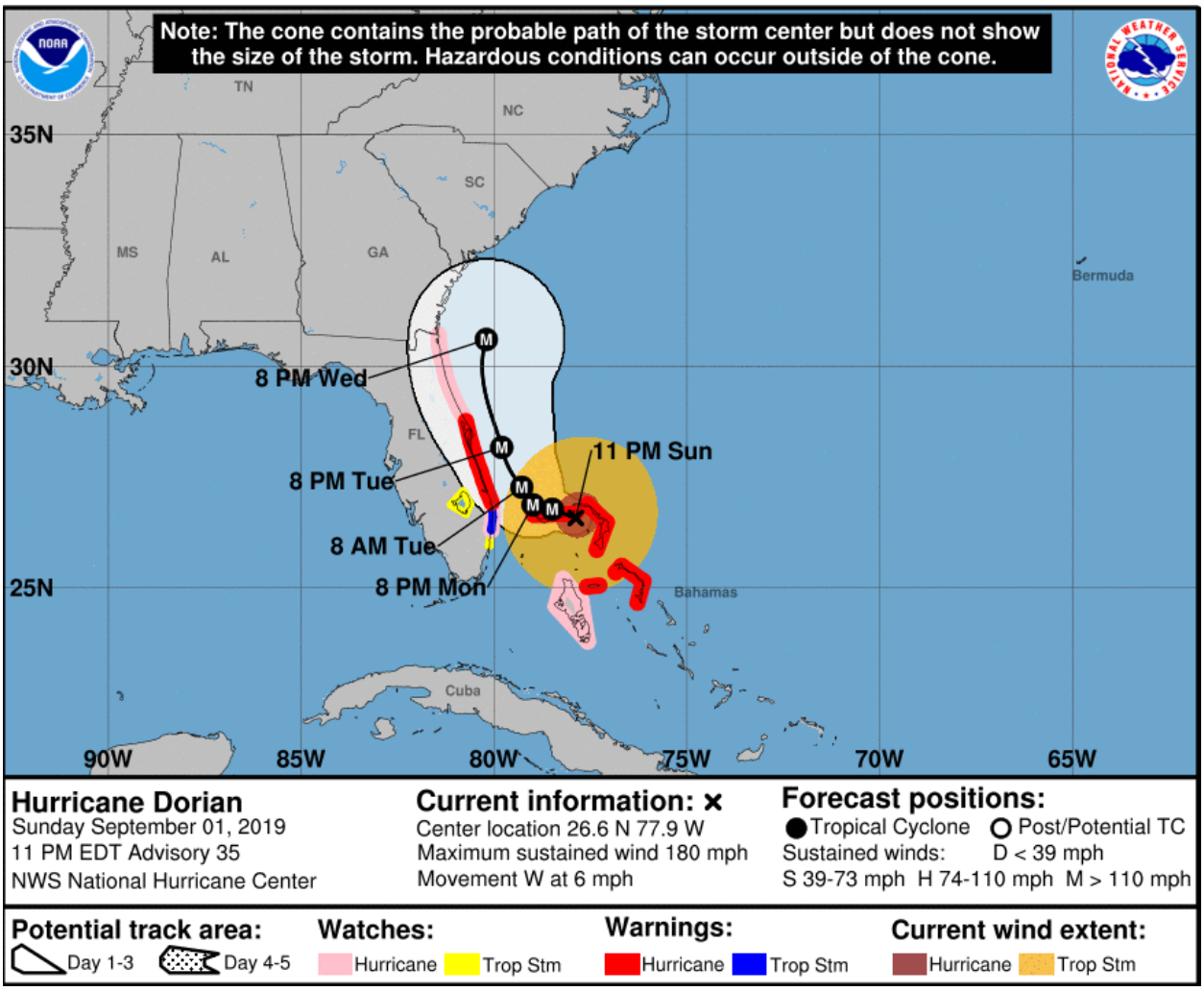

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
IL
WV
KY
VA
TN
NC
SC
MS
AL
GA
FL
35N
30N
25N
8 AM Thu
8 AM Wed
8 AM Tue
8 AM Sun
2 PM Sat
8 PM Sun
Bermuda
Bahamas
Cuba
90W
85W
80W
75W
70W
65W
60W
Hurricane Dorian
Saturday August 31, 2019
2 PM EDT Intermediate Advisory 29A
NWS National Hurricane Center
Current information:
Center location 26.1 N 73.9 W
Maximum sustained wind 150 mph
Movement W at 8 mph
Forecast positions:
Tropical Cyclone
Post/Potential TC
Sustained winds:
D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph
Potential track area:
Day 1-3
Day 4-5
Watches:
Hurricane
Trop Storm
Warnings:
Hurricane
Trop Storm

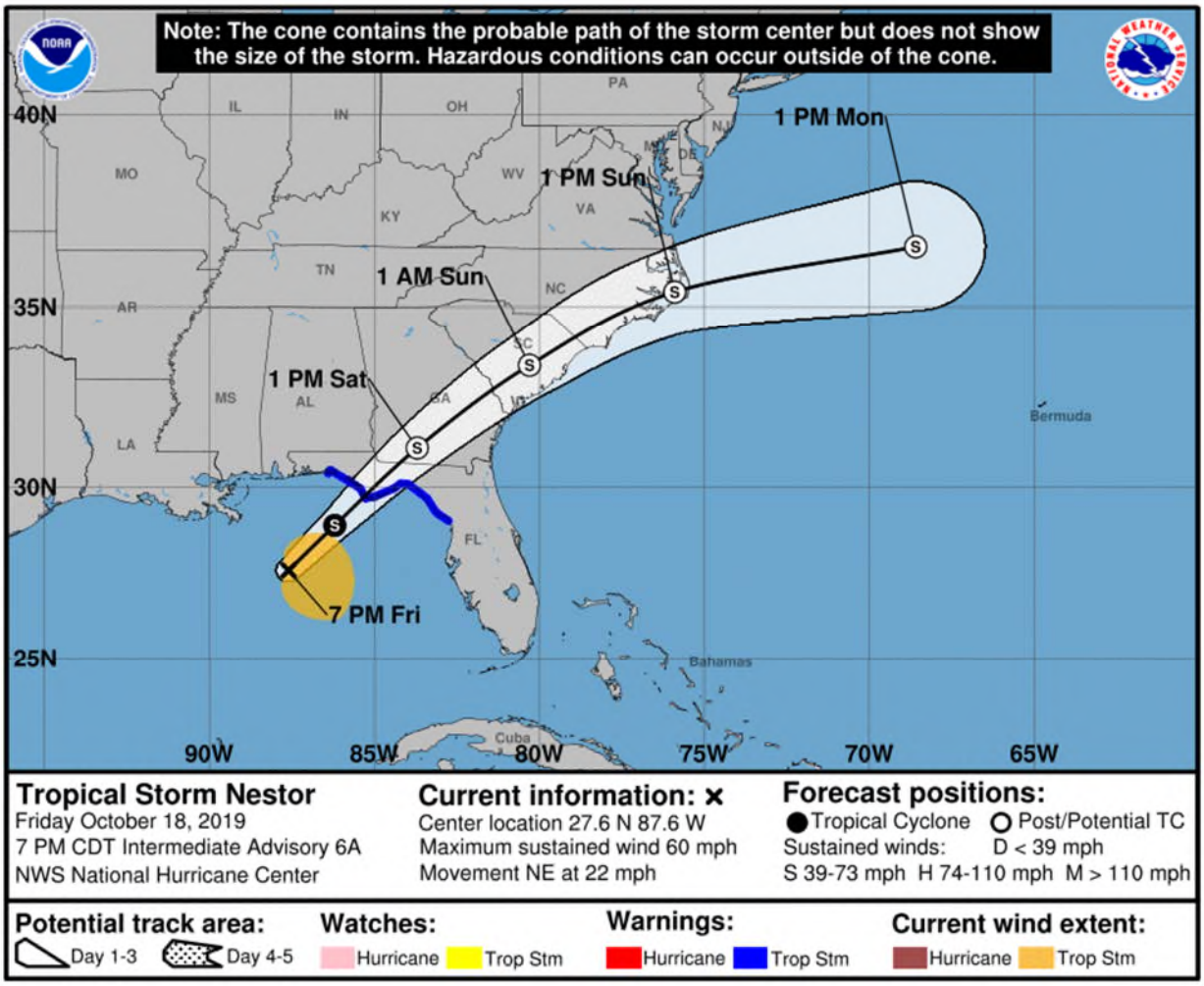

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
8 AM Sat
8 AM Fri
8 AM Thu
8 AM Wed
2 PM Mon
8 PM Tue
8 AM Tue
Bermuda
Bahamas
Cuba
40N
35N
30N
25N
90W
85W
80W
75W
70W
65W
60W
55W
Hurricane Dorian
Monday September 02, 2019
2 PM EDT Intermediate Advisory 37A
NWS National Hurricane Center
Current information:
Center location 26.8 N 78.4 W
Maximum sustained wind 150 mph
Movement WNW at 1 mph
Forecast positions:
Tropical Cyclone
Post/Potential TC
Sustained winds:
D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph
Potential track area:
Day 1-3
Day 4-5
Watches:
Hurricane
Trop Stm
Warnings:
Hurricane
Trop Stm
Current wind extent:
Hurricane
Trop Stm

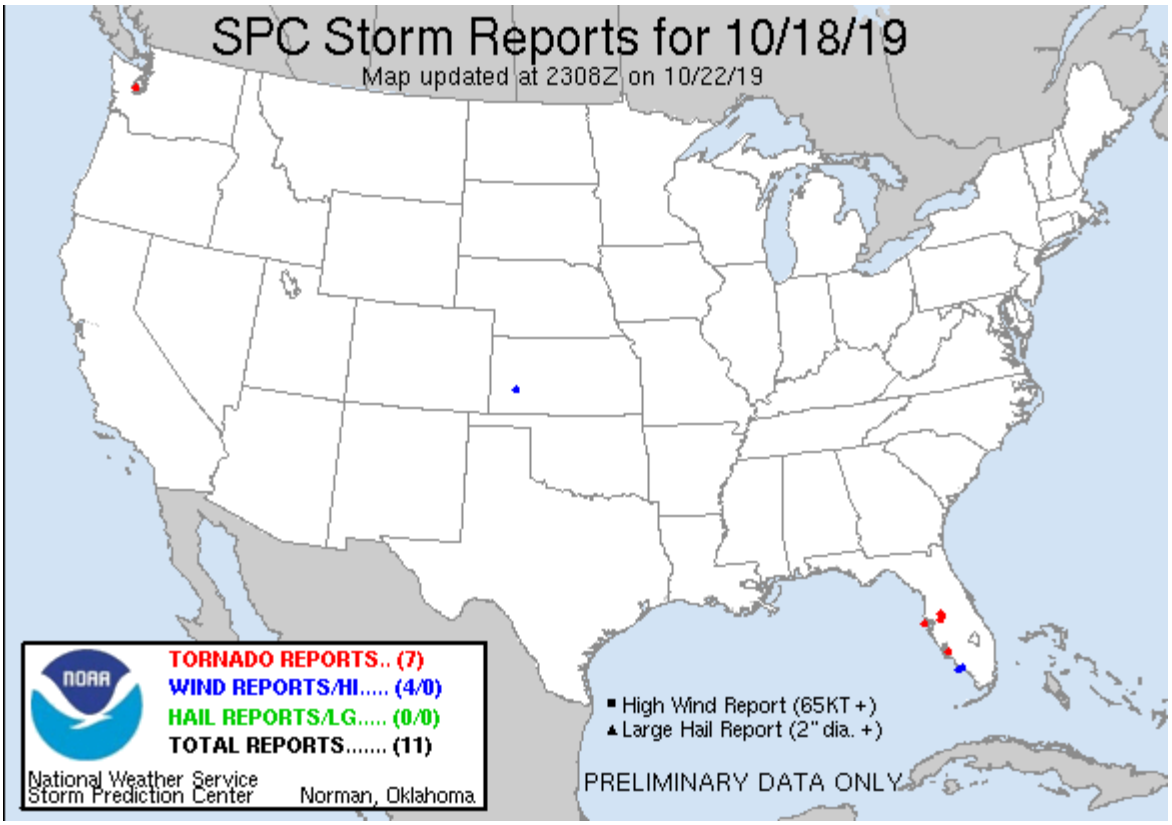


National Weather Service WSR-88D Image from: Melbourne FL 09/04/2019 07:55 (03:55 EST)


Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
35N
AR
MS
AL
GA
SC
LA
Bermuda
30N
2 AM Sat
2 AM Fri
2 AM Thu
Bahamas
25N
Cuba
8 AM Wed
20N
Haiti
Dominican Rep.
Jamaica
Belize
90W
85W
80W
75W
70W
65W
NOAA
Hurricane Matthew
Wednesday October 5, 2016
8 AM EDT Intermediate Advisory 29A
NWS National Hurricane Center
Current Information:
Center Location 21.5 N 74.9 W
Max Sustained Wind 115 mph
Movement NNW at 10 mph
Forecast Positions:
Tropical Cyclone
Post-Tropical
Sustained Winds: D < 39 mph
S 39-73 mph H 74-110 mph M > 110mph
Potential Track Area:
Day 1-3
Watches:
Hurricane
Trop.Storm
Warnings:
Hurricane
Trop.Storm


Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
TN
NC
SC
MS
AL
GA
FL
Bermuda
Bahamas
Cuba
35N
30N
25N
90W
85W
80W
75W
70W
65W
8 PM Wed
8 PM Tue
8 AM Tue
8 PM Mon
11 PM Sun
Hurricane Dorian
Sunday September 01, 2019
11 PM EDT Advisory 35
NWS National Hurricane Center
Current information:
Center location 26.6 N 77.9 W
Maximum sustained wind 180 mph
Movement W at 6 mph
Forecast positions:
Tropical Cyclone
Post/Potential TC
Sustained winds:
D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph
Potential track area:
Day 1-3
Day 4-5
Watches:
Hurricane
Trop Stm
Warnings:
Hurricane
Trop Stm
Current wind extent:
Hurricane
Trop Stm


Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
1 PM Mon
1 PM Sun
1 AM Sun
1 PM Sat
7 PM Fri
40N
35N
30N
25N
90W
85W
80W
75W
70W
65W
Bermuda
Bahamas
Cuba
Tropical Storm Nestor
Friday October 18, 2019
7 PM CDT Intermediate Advisory 6A
NWS National Hurricane Center
Current information:
Center location 27.6 N 87.6 W
Maximum sustained wind 60 mph
Movement NE at 22 mph
Forecast positions:
Tropical Cyclone
Post/Potential TC
Sustained winds:
D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph
Potential track area:
Day 1-3
Day 4-5
Watches:
Hurricane
Trop Stm
Warnings:
Hurricane
Trop Stm
Current wind extent:
Hurricane
Trop Stm


SPC Storm Reports for 10/18/19
Map updated at 2308Z on 10/22/19
TORNADO REPORTS.. (7)
WIND REPORTS/HI..... (4/0)
HAIL REPORTS/LG..... (0/0)
TOTAL REPORTS..... (11)
National Weather Service
Storm Prediction Center
Norman, Oklahoma
High Wind Report (65KT+)
Large Hail Report (2" dia.+)
PRELIMINARY DATA ONLY

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR LIMITED PROCEEDING FOR RECOVERY OF INCREMENTAL STORM RESTORATION COSTS RELATED TO HURRICANE DORIAN AND TROPICAL STORM NESTOR BY DUKE ENERGY FLORIDA, LLC.

FPSC DOCKET NO. 20190222-EI

DIRECT TESTIMONY OF JASON S. WILLIAMS

September 30, 2020

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Jason S. Williams and I am employed by Duke Energy Florida, LLC ("DEF" or the "Company"). My business address is 420 Quail Trail, Monticello Florida, 32344.

Q. Please tell us your position and describe your duties and responsibilities in that position.

A. I am the Vice President of Construction and Maintenance ("C&M") in the Transmission Department for DEF. In this role, I am responsible for the maintenance, new construction and system modifications to DEF's Transmission System. I am also the Transmission Regional Incident Commander ("RIC") for

DEF's Incident Command Structure in the event of a severe storm or other emergency event. As the Transmission RIC, I am responsible for the implementation of the Transmission System Storm Operational Plan ("TSSOP").

Q. Please summarize your educational background and employment experience.

A. I earned a Bachelor of Science degree in Information Studies from Florida State University and began my career with DEF in 2002 as a distribution lineman apprentice in Port St. Joe, Florida. I was given the opportunity to serve in several positions of increasing responsibility and leadership including work management, construction management, and maintenance, all of which provided me with valuable experience leading teams in a variety of work and emergency environments. Before assuming my current position, I was the Manager of North Florida Transmission Maintenance for Duke Energy. In this capacity, I was responsible for north Florida's transmission system, which delivers power to customers located across 30 Florida counties. I also served as Construction Manager for Florida Transmission, where I served as lead for internal and external (contract) construction resources. In summary, more than 18 years of experience in the energy industry have prepared me to serve as Transmission RIC during emergency events.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. Please describe the purpose of your direct testimony.

A. I am testifying on behalf of the Company in support of recovery of the Company's storm-related transmission costs due to Hurricane Dorian and Tropical Storm

Nestor. I will begin by providing an overview of the Company's transmission facilities. Next, I will provide a summary of DEF's TSSOP, and the activation and implementation of that plan for Hurricane Dorian. In summarizing the plan, I will address Transmission's use of emergency preparedness and restoration readiness in making just-in-time decisions regarding acquisition of resources and logistical efforts to support those resources during the storm. Finally, I will testify to the rapid, yet systematic release/transfer of resources as Hurricane Dorian changed course and ultimately spared Florida and DEF's customers the devastation of a Category 5 storm.

Q. Did DEF comply with the Storm Restoration Cost Process Improvements included as part of the Storm Cost Settlement Agreement in Order No. PSC-2019-0232-AS-EI (the "Agreement")?

A. The Agreement's provisions and process modifications did not take effect until the 2020 hurricane season. However, for Hurricane Dorian, DEF made best faith efforts to implement the Agreement's cost saving measures including utilizing updated storm contracts, where available GPS tracking for off-system crews traveling to and from Florida, and caps on meal reimbursements. Additionally, in the restoration phase, DEF was prepared to implement daily timesheet approval, limit pay to hours worked, limit work to maximum 16 hours per day followed by 8 hours rest, restrict meal and fuel reimbursements when provided by DEF, and require documentation for exceptions to meal and fuel provisions.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. I am sponsoring the following exhibits to my testimony:

- Exhibit No.__(JW-1) – Spreadsheet of crew numbers by day.

III. THE COMPANY'S TRANSMISSION SYSTEM

Q. Please provide an overview of the Company's transmission system.

A. The Company's transmission system transmits nearly 9,500MW of generating capacity stepping down through over 5,200 circuit miles of transmission lines and 510 substations to serve approximately 1.8 million retail and wholesale customers in 35 of the state's 67 counties covering over 20,000 square miles of DEF's service territory. Transmission lines are supported by a variety of different structure types including aluminum-alloy and steel towers as well as concrete, steel and wood poles in various configurations. These structure types include a variety of associated conductors, insulators, overhead ground wires, optical ground wires, relays, switches, connectors, ground rods and accompanying hardware.

Q. How is the Company's transmission system organized and managed?

A. DEF’s transmission system is divided into three Transmission Maintenance Areas (“TMA”): North Florida, Coastal Florida and Central Florida. Each of these three areas serve as an Area Incident Command (“AIC”) post with a specific storm/emergency plan aligned through DEF’s Transmission RIC direction and TSSOP.

Transmission manages and maintains the system with internal leadership and DEF skilled crews assigned to the three areas as well as internal traveling crews that support the TMA Crews. All Transmission crews are highly skilled and specialize in Line, Substation, Relay or Vegetation Management. The three TMA's are also augmented with on-system contract crews as needed for construction and maintenance work and other initiatives.

Transmission also manages the interconnections to other utilities within Florida, across state lines and within DEF's system (IOUs, municipalities and co-operative utility groups like Florida Municipal Power Agency ("FMPA") and Seminole Electric Cooperative, Inc. ("SECI")). Each TMA is organized and regularly works with these partners through DEF's Wholesale Account Management. It is the responsibility of the TMA Directors, Wholesale Account Management, and me to communicate and interface with these other utilities regarding operation and maintenance of DEF transmission assets and inter-connections, especially during potential emergency response or a potential major weather event.

IV. OVERVIEW OF TSSOP, EMERGENCY PREPAREDNESS, THE PROCESSES TO ACQUIRE AND STAGE RESOURCES, AND THE LOGISTICAL SUPPORT ESTABLISHED IN PREPARATION TO RESPOND SWIFTLY TO CATEGORY 5 HURRICANE DORIAN.

Q. Please describe the overall approach to emergency/storm response captured in the TSSOP.

A. Duke Energy ("DE") has adopted the Incident Command System/Structure ("ICS") outlined by National Incident Management System ("NIMS") - Federal Emergency

Management Agency ("FEMA"). Similarly, DEF has developed its TSSOP to follow the general ICS for planning, operations and logistics actions to activate and respond to an emergency/storm event. In responding to a storm or emergency event, DEF considers not only the transmission system in its territory but also the transmission systems of other utilities in the state. The TSSOP is designed to provide scalability and immediate communications, while assuring grid stability and decision-making among the Energy Control Center ("ECC"), Distribution Control Center ("DCC"), distribution system and Transmission leadership. The TSSOP is structured separately but aligned with DEF's Distribution System Storm Operational Plan ("DSSOP") in order to respond safely, efficiently and effectively to any storm event that impacts DEF's transmission system assets.

As Transmission RIC, I work directly with the Distribution RIC to declare an event, activate resources needed for storm restoration, determine the state of the system, and establish a realistic Estimated Time of Restoration ("ETR"), while our Incident Management Team ("IMT") prepares and stages resources (based on Meteorology, Planning Section's modeling, and leadership experience decisions).

The TSSOP is a seven-chapter document that references, or houses plans, processes, tools, training, roles, organizational charts, checklists, and action plans that purposefully drive the Transmission organization toward emergency preparedness. The ongoing, annual readiness model within the plan provides year-round storm roles and responsibilities. As the first half of the year closes and DEF's system becomes more exposed to tropical storm events during the second half of

the year, storm role preparedness and training increase to ensure that the Transmission organization is adequately equipped for storm restoration efforts.

Emergency Preparedness and Restoration Readiness rely on planning, preparing, practicing, and performing in accordance with the TSSOP. The Storm Organization and the TSSOP are designed to use 'blue sky' expertise in 'red sky' conditions. Each section of the TSSOP defines the plan and protocols at which the RIC and IMT, Operations, Planning, and Logistics work together through the emergency event. Together, they methodically determine level of activation, volume of resources, and timing of deployment of resources. These leadership teams are the experts that lead and direct the maintenance, monitoring, and repairs/construction of the DEF transmission system during non-emergency times; therefore, the TSSOP supports using knowledgeable and experienced resources to swiftly respond to an emergency event in a scalable manner.

Q. Was planning for Hurricane Dorian different than planning implemented by DEF during past storms and was having a plan in place for Hurricane Dorian useful?

A. Yes. Having an ICS, flexible, adaptable plan is imperative, because every major storm event is unique. Over the course of several days, Dorian developed into a Category 5 hurricane heading directly at the heart of DEF's service territory. Its slow development from a tropical system to a catastrophic storm provided the opportunity for Transmission to methodically work the TSSOP. Having an emergency preparedness/storm plan in place allowed DEF leadership to make

decisions so that the Company was ready for impact and possible devastation, or able to release and transfer crews swiftly to other service territories as needed.

Q. What was unique or difficult about planning for Hurricane Dorian?

Dorian's initial forecast called for the storm to make landfall on the east coast of Florida, move across the state, enter the Gulf of Mexico and then make landfall a second time in the Florida panhandle. This forecast quickly changed to one calling for Dorian to make landfall on the east coast, stall temporarily, and then move north through the center of the state. With this revised forecast, rain fall totals for the center of the state were predicted to range from six to eighteen inches, with a potential for flooding and closures of both I-95 and I-75. Dorian intensified to a Category 5 hurricane with 185 mph sustained winds and over 200 mph gusts before stalling over the Bahamas, where it caused massive destruction. As Dorian's path shifted towards Florida at Category 5 hurricane strength, DEF moved quickly to implement its plan for addressing the anticipated aftermath of this major storm event.

Hurricane Dorian was the fifth Category 5 hurricane to form in the Atlantic in recent history, following Matthew (2016), Irma (2017), Maria (2017) and Michael (2018). Florida utilities have an obligation to both serve customers and to restore power as safely and swiftly as possible. Considering Dorian's forecasted strength and trajectory and the recent history of Category 5 storms in the Atlantic, DEF's decision to prepare for recovery from a direct hit by a Category 5 hurricane was prudent and responsible. DEF had to make difficult decisions on an expedited basis

to acquire the proper balance of resources with enough time to respond to the anticipated impact of a Category 5 hurricane.

DEF Transmission is fortunate to have skilled contractual resources available for 'blue sky' work that can transition to emergency restoration work efficiently and quickly. Planning for a Category 5 storm adds a level of complexity with respect to contractual resources because infrastructure in the path of the storm may be destroyed. On-system resources (internal and contractor) are assigned work based on skill and geographic area.

As stated above, Hurricane Dorian was initially forecasted to cut across Florida. In planning for that path of destruction, experience would suggest placing approximately half resources in the north and half in the south portions of DEF's transmission system. In addition, Transmission considered possible destruction of roadways and evacuation traffic which would have impeded any swift travel to locations of restoration. DEF's process of evaluating, identifying, and acquiring necessary resources pursuant to the projected damage demonstrated a need for DEF to have additional resources outside of the state ready to respond. Transmission considered the many uncertainties surrounding a Category 5 storm, including the impact area, magnitude of the impact, system/grid stability, the time needed to restore service, and the ability to shift resources both north and south of the storm's projected path.

Q. Explain the challenge with acquiring resources and assets needed for swift restoration.

The supply of skilled transmission resources available in a blue-sky day is limited. Following a Category 5 direct hit, the supply is severely limited. The supply of assets to support those resources, such as sleeper trailers and mobile kitchens is also drastically limited during a Category 5 storm because every utility and emergency facility in the storm's path is forced to compete for the same resources.

Pre-negotiated contracts for skilled work force provides a level of confidence that DEF can secure resources when needed. Any delays in securing the skilled contractual resources needed to respond to a Category 5 storm can cause significant detriment to a utility's storm restoration plan. Waiting too long, puts the utility at risk of having to secure resources from longer travel distances or of not being able to secure skilled resources at all.

Q. How did Transmission determine the number of restoration resources to acquire for Hurricane Dorian transmission restoration support?

A. Transmission's resource plan always has a core set of resources ready to activate based on existing employee and on-system/native contract crews. A potentially catastrophic hurricane like Dorian is part of the reason Transmission is structured with both types of crews in all DE jurisdictions.

Transmission organized the response of its resources to Hurricane Dorian in three separate waves. Wave 1 consisted of on-system/native crews staged in place

through landfall and ready to mobilize anywhere within the State. Wave 2 was comprised of crews from other DE jurisdictions or those with DEF agreements that were acquired and mobilized or ready-to-mobilize to mustering sites located in nearby states, including Georgia and Tennessee. Wave 3 was made up of Southeastern Electric Exchange ("SEE")/mutual assistance resources that were acquired and remained on stand-by/ready to travel or work at their home locations. Acquiring crews in 'waves' provided flexibility to increase or decrease the resources required for the DEF system response as needed.

To reiterate, DEF Transmission utilizes the appropriate Level of Event protocols in making decisions regarding resources as defined in the TSSOP. Transmission secures on-system, most familiar and readily available resources first, secures transmission resources within other DE jurisdictions second, and SEE Mutual Assistance resources third. In all cases, DEF requests restoration resources that are the furthest away from the impacted area to travel and muster nearby to be ready to respond as soon as safely feasible.

In addition, Transmission secured Logistics and Site Vendor Agreements for two of four possible staging sites and sleeper trailers (where available) and hotel beds to house expected crews.

Q. When did the Company's mutual assistance costs for Hurricane Dorian begin to accrue?

A. Costs for Hurricane Dorian began to accrue at the end of August 2019. Per industry standard, costs related to contractor crews, mutual assistance, and logistics assets begin to accrue when the responding entities begin action directly related to travel and work on DEF's system.

Q. Please describe how resource planning and damage assessment assists in providing accuracy around resource assignment and logistical support.

A. The resource planning process begins in the pre-event planning timeframe and continues throughout the storm event; resource planning feeds the damage assessment plan. For a significant storm event like Dorian, both the projected and actual paths of impact affect Transmission Damage Assessment ("DA") plans. DA assets including helicopters, Unmanned Aerial Vehicles ("UAV" or drones) teams, pilots, aerial teams and video/cameras are critical to the success of the storm plan. Therefore, these resources are some of the earliest that must be acquired by Transmission and last to be released when the path or impact of the storm changes.

DA is critical to efficient and effective deployment of resources and storm restoration efforts. Initially, prioritization of system restoration is determined by the ECC; however, the AIC must assess damage and develop a strategic plan to get the transmission system restored and stable. Once it is safe to do so, DEF assesses damage to the system using a combination of helicopters, UAV, and ground vehicles to review every mile of transmission line potentially impacted by the storm. The ground assessment teams remove debris and trees in lines and complete minor repairs to the system. The aerial damage assessment team records storm

damage, and passes damage information to the RIC, AIC, and ECC. The RIC and AIC use the damage information to create restoration plans. Depending on the extent of damage observed and recorded, DEF's Transmission planning team and crew management determine personnel and equipment needed to restore the transmission system. It is at this point (usually within 24-48 hours after the storm passes) that Transmission can determine if additional resources should be deployed to DEF's system or if resources are not needed and can be released.

After the storm has passed, Logistics completes the acquisition of logistics vendors and assets, and arranges for material and equipment to be supplied to line and vegetation crews as needed. Logistics also acquires housing, activates base camp sites, and ensures vendors and resources are in place to provide meals, fuel, and beds to restoration crews.

Determining estimated resource needs prior to a storm's impact and reviewing actual needs during and after damage assessment allows DEF Transmission to gain accuracy in resource acquisition. This process is followed during planning and after landfall for every event.

Q. Please explain the timing of the decisions made to assure availability of transmission resources for the impending Category 5 Hurricane Dorian.

As shown in Exhibit JW-1, Transmission continuously requested, acquired and released crews according to Dorian's projected path and the estimated necessity of actual needs. The timing of Transmission's decisions was as follows:

- August 27, 2019: Dorian was identified as a potential threat to DEF's transmission system. Transmission began by first identifying resources currently working on-system that could be utilized for this event. Approximately 450 internal and native contractor resources were identified as available but not yet activated.
- August 28, 2019: Dorian showed signs of strengthening and its projected path posed an increased threat of impact to DEF's transmission system. DEF requested an additional 150 resources from other DE jurisdictions. Transmission began to develop a plan to acquire additional resources, if needed, by initiating mutual assistance calls to identify an additional 600 resources.
- August 29, 2019: Transmission acquired nearly 600 total resources, consisting of approximately 450 DEF crews and 150 crews from other DE jurisdictions. DEF requested 600 resources from Mutual Assistance (SEE and other DE jurisdictions) but did not yet incur costs for the requested crews.
- August 30, 2019: DEF's request to Mutual Assistance was increased from approximately 600 to 900 resources. By close of business, DEF confirmed an additional approximately 700 resources were activated and able to travel, muster, and make ready to work for a total of approximately 1300 crews acquired and activated. As transmission teams were preparing to travel and muster in Georgia, FEMA took over the mustering site that Transmission had prepared. Transmission was forced to acquire new accommodations at a nearby town and divert traveling crews there. As the acquisition of resources was nearing completion, Dorian was continuing to strengthen to a Category 4 storm.

- August 31, 2019: Due to Dorian's projected trajectory, DEF released approximately 450 Mutual Assistance crews acquired on August 30, back to the Carolinas and acquired nearly 200 crews from other DE jurisdictions. Transmission held the acquired crews consisting of approximately 550 on-system/native and contractor crews in Florida, approximately 200 crews in Georgia, and approximately 300 Mutual Assistance.
- September 1, 2019: Dorian became a Category 5 storm with a projected trajectory that encompassed Central Florida, DEF's Transmission Central Area. DEF added SEE crews due to the crews released to DE Carolinas jurisdictions, the total number of crews increased by less than 100 from August 31.
- September 2, 2019: Dorian showed signs of weakening and turning away from Florida. Transmission held the crews where they were and released selected specialty equipment items, including helicopters to the Carolinas and barges held in case of flooding in the gulf. DEF began to release hotel rooms reserved for potential coastal impacts. Crews were held until the certainty of threat was removed.
- September 3, 2019: DEF held approximately: 550 on-system Line and Vegetation crew members standing by in Florida; 200 off-system DE crews (CMV & Contract) standing by in base camps and mustering sites in Tifton and Macon; 300 SEE crews for Line and Vegetation standing by in their respective home locations; DEF completed the release of all coastal hotel beds; and kept 1400 hotel beds in Florida and Georgia on hold.
- September 4, 2019: Dorian no longer posed a threat to DEF's system. Transmission methodically released the majority of remaining crews over the

next 48 hours including the remaining DE crews and SEE crews for possible transition to Carolinas, on-system crews and base camp teams, and remaining contract vegetation management and a small core group of line contractors to support sweeps.

Q. Describe the volume and skills of resources deployed during the Hurricane Dorian storm response.

A. During Hurricane Dorian, DEF was prepared to deploy up to a total of approximately 1,500 skilled transmission resources, including linemen, electricians, relay technicians, tree trimming personnel and logistics personnel. As indicated above, the majority of these resources were maintained in muster locations and ready to work status during Hurricane Dorian. Of this total deployment number, approximately 900 were released on or before September 4, 2019. On September 5, approximately 400 more were released. Approximately 250 resources made up of approximately 200 vegetation workers and 50 line workers were kept on the system until September 6 to complete sweeps and assure no damage from leaning or fallen trees. These remaining crews consisted of half on-system and half off-system resources.

The command center's staff (RIC and AIC), logistics staff, including base camp and site teams, and damage assessment teams were some of the first to be deployed to make travel clear and safe, identify the types of damage causing outages, and

prepare base camps (parking, fueling, materials laydown yards), beds, and meals for restoration crews.

Four Damage Assessment teams of ground-crews and air-teams strategically traveled DEF's transmission system to identify and clear hazards, such as fallen trees, poles, and lines to make the route safe for the restoration crews to complete work.

Just as DEF prioritizes the use of its skilled employees and on-system crews, DEF utilizes all company-owned equipment before it secures additional rental equipment needed during a storm. Because specialty equipment was needed for restoration work, Transmission acquired resources that were skilled and certified to operate numerous pieces of assessment and construction equipment such as helicopters, cranes, track digger derricks, marsh masters, light towers, water trucks, tractors, lull type forklifts, backhoes, dump trucks, bulldozers, generators, and fuel tanker trucks.

Q. How does DEF assure the availability of skilled resources necessary to restore utility services to its customers during an emergency event like Hurricane Dorian?

A. As previously mentioned, Transmission has a core team of employees and on-system contractors that can respond to a local emergency event. If modeling and experience suggest that additional skilled resources are needed, DEF relies first on resources from other DE jurisdictions, second on previously negotiated contract

agreements with other in-state and out-of-state vendors, and third on SEE Mutual Assistance contractors and vendors.

V. HURRICANE DORIAN

Q. Was the Transmission's Storm Plan implemented for Hurricane Dorian?

A. Yes. DEF Transmission began monitoring TS Dorian on Monday, August 26, 2019, and implemented the TSSOP on Wednesday, August 28, 2019. RIC, AIC, and System Storm Centers were activated beginning on August 28, 2019.

Q. What was the impact of Hurricane Dorian on DEF's Transmission system?

A. Fortunately for the state and for DEF, on September 2, 2019, Hurricane Dorian made a northward turn up Florida's east coast and spared DEF's transmission's service territory from a direct hit. During Hurricane Dorian, seven DEF transmission circuits (or line segments), two DEF substations, and two DEF wholesale points-of-delivery ("POD") went out of service.

Q. What were Transmission's planning and restoration priorities during Hurricane Dorian?

A. The overall priority of the Company during any emergency response is the safety of DEF employees, contractors, customers, and the public. As with any emergency event, DEF took steps to ensure that the reliability of the state-wide transmission grid was not undermined due to hurricane damage. At the outset, the Company implemented measures to ensure that the proper balance of resources, equipment, and logistical support were acquired and ready to deploy when it was safe to do so.

As part of the TSSOP, transmission lines are prioritized in order to establish grid security for the state and DEF, and limit economic impact to DEF and its customers. During Hurricane Dorian, the Wholesale Customer Emergency Center, in conjunction with AIC, worked closely with DEF wholesale customers to coordinate and prioritize the restoration of the affected POD to their electrical systems. This is a significant part of the strategy and tactics deployed for restoring DEF's transmission system in cooperation with neighboring utilities.

Q. Were there any additional efforts made to coordinate storm restoration?

A. As part of DEF's emergency response, Transmission and Distribution communicate continuously throughout an event through the Incident Command and leadership levels to assure ETR goals are aligned, and that the system comes online effectively. As Transmission and Distribution confirm the 'initial system level ETR' first and then Transmission focuses on Substation ETRs and 230kV (and above) Line ETRs, Transmission is responsible for working with other utilities to assure Bulk Electric System/Grid stability. Together, Distribution and Transmission work toward a coordinated effort for impacted counties/cities (municipalities; utility co-operatives, etc.). Even though the actual damage caused by Hurricane Dorian to the transmission system was minimal, Wholesale Customer Emergency Center remained engaged until Hurricane Dorian was no longer a threat.

Q. How do you evaluate the effectiveness of your storm planning and restoration process?

A. First, Transmission evaluates storm restoration effectiveness through daily ETR goals for energizing substations and restoring system stability. Because the transmission system must be up and running before customers can receive power, emphasis is placed on energizing substations that have been damaged by the storm in order to set the stage for the restoration of customer service. Transmission sets and revises ETR goals for substations as it learns more about storm damage from damage assessment teams and as resources are prioritized. Transmission met or exceeded all ETR goals for Hurricane Dorian.

Second, Transmission evaluates whether it timely released off-system resources. In order to keep response costs as low as possible, Transmission strives to maintain a balance between the need to respond to the threat posed by a storm and the desire to keep response costs to a minimum. Specific to Hurricane Dorian, Transmission successfully balanced these factors by prudently preparing to respond to the threat posed by the storm and swiftly responding to the damage caused by the storm and then releasing resources as early as feasible.

Q. Were the Company's storm-related efforts complete when downed transmission lines and substations were re-energized?

A. No. Re-energization is not the end of restoration for the transmission system; 'sweeps' across the system is a requirement to assure everything has been restored as required for grid stability and system functionality. Following the immediate repair efforts for Hurricane Dorian, Transmission conducted sweeps of the transmission system to identify further storm-related damage that necessitated

repair or replacement. After the sweeps were completed, Transmission sent out crews to repair any additional storm damage that was identified. In addition, Transmission vegetation management crews continued clean up and trimming efforts so that all transmission rights-of-way were in safe, operational condition.

Q. How would you characterize the Company's implementation of its Transmission Department Storm Plan during Hurricane Dorian?

A. The TSSOP played an important role in the efficient and effective preparations to Hurricane Dorian's threat to DEF's transmission system. The plan assisted the storm team in developing its strategy and tactics to swiftly execute and meet or exceed Transmission's expected system restoration. Overall, Transmission's planning and restoration efforts were quite successful given the unprecedented nature of Hurricane Dorian.

Q. Please identify what incremental costs the Company incurred as a result of Hurricane Dorian.

A. Incremental restoration and rebuild costs directly attributable to the Company's transmission system because of Hurricane Dorian are $7.8 million, as shown in Mr. Morris's Exhibit No. __ (TM-2).

VI. TROPICAL STORM NESTOR.

Q. What was the impact of TS Nestor on DEF's transmission system.

A. There was no impact to DEF's transmission system from TS Nestor.

Q. Were transmission costs incurred for TS Nestor?

A. Yes, Transmission staged some Vegetation Management crews in Perry, Florida to support any transmission line right of way impacts (trees falling into lines). These costs are shown on Mr. Morris's Exhibit No. __ (TM-2).

Q. Please identify what incremental costs that Transmission incurred as a result of TS Nestor.

A. Incremental restoration and rebuild costs directly attributable to the Company's transmission system because of TS Nestor are $22,000, as shown in Mr. Morris's Exhibit No. __ (TM-2).

Q. Does this conclude your testimony?

A. Yes.

Dorian Crews Requested, Activated, and Released By Date*

	Requested	Activated	Released	Available by day
27-Aug	450			0
28-Aug	150			0
29-Aug	600	569		569
30-Aug	300	720		1289
31-Aug		174	446	1017
1-Sep		71		1088
2-Sep				1088
3-Sep		2		1090
4-Sep			456	634
5-Sep			392	242
6-Sep			237	5
7-Sep			5	0
TOTAL	**1500**	**1536**	**1536**	

*Numbers are estimates from day end totals

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

RE: PETITION FOR LIMITED PROCEEDING FOR RECOVERY OF INCREMENTAL STORM RESTORATION COSTS RELATED TO HURRICANE DORIAN AND TROPICAL STORM NESTOR BY DUKE ENERGY FLORIDA, LLC.

FPSC DOCKET NO. 20190222-EI

DIRECT TESTIMONY OF THOMAS G. FOSTER

SEPTEMBER 30, 2020

Q. Please state your name and business address.

A. My name is Thomas G. Foster. My business address is Duke Energy Florida, LLC, 299 1st Avenue North, St. Petersburg, Florida 33701.

Q. By whom are you employed and what is your position?

A. I am employed by Duke Energy Florida, LLC ("DEF" or the "Company") as Director of Rates and Regulatory Planning.

Q. Please describe your duties and responsibilities in that position.

A. I am responsible for the Company's regulatory planning and cost recovery, including the Company's Storm Cost Recovery Filings.

Q. Please describe your educational background and professional experience.

A. I joined the Company on October 31, 2005, in the Regulatory group. In 2012, following the merger with Duke Energy Corporation ("Duke Energy"), I was

promoted to my current position. I have 6 years of experience related to the operation and maintenance of power plants obtained while serving in the United States Navy as a Nuclear Operator. I received a Bachelor of Science degree in Nuclear Engineering Technology from Thomas Edison State College. I received a Master of Business Administration with a focus on finance from the University of South Florida and I am a Certified Public Accountant in the State of Florida.

Q. What is the purpose of your direct testimony?

A. The purpose of my testimony is to explain DEF's proposed true-up of any final over or under recovery amount related to the Interim Storm Restoration Recovery Charge effective the first billing cycle of March 2020 and ending the earlier of full recovery or with the last billing cycle of February 2021. This charge was approved by the Commission in Order No. PSC-2020-0058-PCO-EI.

Q. Do you have any exhibits to your testimony?

A. Yes, I am sponsoring Exhibit No. __ (TGF-1) "Recovery of Storm Restoration Costs." This Exhibit shows the total recoverable restoration costs, along with monthly revenues and interest collected through August 2020. An update to this Exhibit will be filed with the Commission on or before April 1, 2021.

Q. Please describe the Interim Storm Restoration Recovery Charge.

A. The Interim Storm Restoration Recovery Charge was designed to recover estimated storm restoration costs related to Hurricane Dorian and Tropical Storm ("TS") Nestor. In Order No. PSC-2020-0058-PCO-EI, the Commission approved DEF's

Interim Storm Restoration Recovery Charge associated with the estimated $171.3M of incremental restoration costs for Hurricane Dorian and TS Nestor effective for a 12-month period from March 2020 through February 2021, or until fully recovered. The Order states "once the total actual storm costs are known, DEF shall file documentation of the storm costs for our review and true-up of any excess or shortfall of monies collected pursuant to this charge. We will consider the disposition of any over or under recovery, and associated interest, at a later date."

Q. How will DEF determine the final over or under recovery true-up amount related to the Interim Storm Restoration Recovery Charge, and what is DEF's proposal to refund or charge customers for any excess or shortfall?

A. DEF will compare the final Storm Recovery Amount approved for recovery by the Commission to actual revenues from the Interim Storm Restoration Recovery Charge to determine any excess or shortfall. Interest will be applied to this amount at the 30-day commercial paper rate. Thereafter, DEF proposes to include the excess or shortfall in the capacity clause for inclusion in customer bills through the normal true-up process. This true-up of the storm costs is consistent with the 2017 Settlement approved in Order No. PSC-2017-0451-AS-EU.

Q. How will DEF notify the Commission of the actual revenues received from the Interim Storm Restoration Recovery Charge?

A. DEF will file a supplement to my direct testimony in the form of Exhibit No. __ (TGF-2), on or before April 1, 2021, that shows actual recoverable restoration costs,

along with monthly revenues and interest collected through the earlier of February 2021 or full recovery of the total recoverable storm restoration costs.

Q. When do you estimate that the storm restoration costs will be fully recovered?

A. Based on current estimated revenues, DEF believes the storm restoration costs will be fully recovered by the end of December 2020; otherwise the charge will continue as necessary until full recovery.

Q. Does this conclude your testimony?

A. Yes.

Duke Energy Florida, LLC
Hurricane Dorian/Tropical Storm Nestor
Recovery of Storm Restoration Costs
($000's)

	(A)	(B)	(C)	(D)	(E)=C+D	(F)=B+E
Year	**Month**	**Total Recoverable Restoration Costs**	**Revenues**	**Interest**	**Net Monthly Activity**	**Ending Balance**
2020	March	(144,671)	12,015	(218)	11,797	(132,874)
2020	April	(132,874)	14,133	(120)	14,013	(118,860)
2020	May	(118,860)	13,078	(7)	13,071	(105,789)
2020	June	(105,789)	15,341	(8)	15,333	(90,456)
2020	July	(90,456)	17,778	(8)	17,770	(72,686)
2020	August	(72,686)	17,237	(6)	17,231	(55,455)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

RE: PETITION FOR LIMITED PROCEEDING FOR RECOVERY OF INCREMENTAL STORM RESTORATION COSTS RELATED TO HURRICANE DORIAN AND TROPICAL STORM NESTOR BY DUKE ENERGY FLORIDA, LLC.

FPSC DOCKET NO. 20190222-EI

DIRECT TESTIMONY OF TOM MORRIS

SEPTEMBER 30, 2020

I. INTRODUCTION AND QUALIFICATIONS.

Q. Please state your name and business address.

A. My name is Tom Morris. My current business address is 3300 Exchange Place, Orlando, Florida 32746.

Q. By whom are you employed and what are your responsibilities?

A. I am employed by Duke Energy Business Services, LLC, a Service Company affiliate of Duke Energy Florida, LLC ("Duke Energy Florida," "DEF," or the "Company") and a subsidiary of Duke Energy Corporation ("DE"). My current position is the Director of Customer Delivery Florida Finance. I oversee a group that has responsibility for the budgeting and forecasting, expense and capital accounting for Distribution Operations among other responsibilities. I also collaborate with other finance personnel with similar responsibilities for Transmission Operations, Customer Operations and Fossil/Hydro Generation Operations, and thus I am representing the finance and accounting organizations

that provide support to the functional groups of DEF that incur expenses during major storm events.

Q. Please summarize your educational background and professional experience.

A. I have a Bachelor of Science in Accounting from The Florida State University. Following graduation in 1993, I began my career at Ralicki & Thomas CPAs, in Stuart, Florida. I worked three years at Ralicki & Thomas CPAs, focusing on audits of GAAP financial statements and preparing personal and corporate tax returns. In 1999, I joined DE in their Distribution Finance organization where I was responsible for the monthly financial reporting and annual budget preparation. In October 2015, I was promoted to Director of Customer Delivery Finance.

II. PURPOSE OF TESTIMONY.

Q. What is the purpose of your direct testimony?

A. On December 19, 2019, DEF filed estimated storm costs in the instant docket associated with Hurricane Dorian and Tropical Storm ("TS") Nestor. The purpose of my testimony is to explain and support the actual storm costs for Hurricane Dorian and TS Nestor, and to discuss the methods used to comply with Rule 25-6.0143, FAC., and, where possible, the Storm Cost Settlement Agreement approved in Order No. PSC-2019-0232-AS-EI ("Agreement"), to identify and remove non-incremental O&M and capitalized costs from total restoration storm costs. As stated in the Agreement[1], DEF adhered to the restoration-related provisions where

[1] See Agreement, p. 8, section 6.

possible during the 2019 storm season and will fully comply with the Agreement for 2020. This is a provision of the Agreement that was agreed to by both DEF and OPC.

Q. Do you have any exhibits to your testimony?

A. Yes, I am sponsoring the following exhibits to my testimony:

- Exhibit No. __ (TM-1) – Storm Costs Recovery Total
- Exhibit No. __ (TM-2) – Storm Costs by Storm
- Exhibit No. __ (TM-3) – Storm Costs Interest Calculation

These exhibits were prepared under my direction and control, and are true and accurate to the best of my knowledge.

Q. Please describe the net costs for which recovery is sought in this proceeding.

A. DEF is seeking recovery for those costs that are incremental, as defined under the Incremental Cost and Capitalization Approach ("ICCA") methodology required under Rule 25-6.0143, F.A.C. The Company has prudently incurred $144.56 million (retail) of incremental restoration costs for Hurricane Dorian and TS Nestor as shown in Exhibit No. __ (TM-1). These costs exclude all non-incremental costs, as defined under the ICCA methodology and adopted under the Agreement, and exclude amounts properly capitalizable under the Company's capitalization policy. These costs, plus estimated interest and regulatory assessment fees of $0.5 million, total $145.0 million sought for recovery in this proceeding. Interest expense of $0.38 million is shown in Exhibit No. __ (TM-3). March 2020 to August 2020 interest is calculated at the commercial paper rate consistent with that used in the

Fuel Cost Recovery Clause. The rates are consistent with A-Schedule A2, Page 2 of 2, Line D8, filed monthly in Docket 20200001-EI. September 2020 forward is calculated based on the August 2020 rate.

Q. Please explain how storm-related costs are tracked and accounted for during and after each storm, and the process that the Company uses to verify that costs assigned to the storms were in fact related to the storms and were incremental.

A. When a potential major storm event is approaching its service territory, DEF creates separate project codes for each function (Distribution, Transmission, Customer Operations, Fossil/Hydro Generation) to be used to process and aggregate the total amount of storm restoration costs incurred for financial reporting and regulatory recovery purposes. DEF uses these codes to account for all costs directly related to storm restoration, including costs that will not be recoverable from DEF's storm reserve, based on the ICCA methodology and as further clarified in the Agreement. All storm restoration costs charged to these storm projects are initially captured in FERC Account 186, Miscellaneous Deferred Debits except for Transmission capital projects.[2] All costs charged to FERC Account 186 are subsequently reviewed, and based on the outcome of that review, are cleared and charged to either the storm reserve (FERC Account 228.1), normal O&M expense or capital. See below for further discussion of the Company's process to review incurred costs and

[2] Transmission follows the same process except that any capital work that is done during the major storm is charged directly to specific projects that are mapped to FERC Account 107.

ensure only allowable costs as defined in the ICCA methodology and Agreement are included for recovery.

Q. Please further explain the process for accumulating accounting data related to storm costs.

A. For Distribution, major storm costs are initially accumulated in FERC Account 186, including charges that are considered non-incremental or capital. Using the ICCA methodology and Agreement, non-incremental amounts are identified and subsequently credited from FERC Account 186 and debited to base rate O&M expense. Capital costs are also identified and subsequently credited from FERC Account 186 and debited to FERC Account 107, Construction Work in Progress. After non-incremental and capital costs are removed from FERC Account 186, the remaining balance is then credited, and FERC Account 228.1 is debited to bring FERC Account 186 to zero leaving only allowable costs for recovery in Account 228.1. Transmission follows the same process except that any capital work that is done during the major storm is charged directly to specific projects that are mapped to FERC Account 107.

Q. Please explain costs incurred by DEF for Hurricane Dorian and TS Nestor?

A. Exhibit No. __ (TM-1) summarizes total recoverable storm costs for both storms:

- Hurricane Dorian (2019): $144.4 million
- TS Nestor (2019): $0.2 million

Exhibit No.__(TM-2) breaks out recoverable storm costs by function for each storm.

While most costs were incurred for Hurricane Dorian, and my testimony below is in reference to that storm, DEF's cost accumulation and review processes were similar for both storms. As previously mentioned, all storm-related costs, except for Transmission capital projects,[3] were recorded to FERC Account 186 and subsequently reviewed to determine the amount that was considered non-incremental under the ICCA methodology and Agreement, and excluded from this storm recovery request.

In discussing the nature of the costs incurred for Hurricane Dorian and TS Nestor, it is essential to have a clear understanding of Rule 25-6.0143, F.A.C. and the Agreement. I will focus on allowable costs, then address the types of costs specifically prohibited under the ICCA methodology in my testimony below.

As shown on Exhibit No.__(TM-2), DEF's incurred costs for Hurricane Dorian and TS Nestor fall into the following categories, and, when netted with non-incremental costs, are consistent with the ICCA methodology and the Agreement.

1. Regular payroll – Amounts in this category represent regular payroll for employee time spent in direct support of storm restoration and exclude

[3] *See* footnote 2.

bonuses. During both storms, payroll costs were incurred related to DEF employees as well as DE affiliate employees assisting in the storm response. To identify the non-incremental amount, the three-year historical average (September of 2016-2018) of non-storm O&M base regular payroll is compared to the actual non-storm amount charged to O&M base regular payroll in September 2019 for Transmission and Distribution ("T&D"). If the average is higher than the amount incurred in September 2019, that difference is removed from FERC Account 186 as the non-incremental amount and charged to Income Statement O&M. If the amount incurred in September 2019 is higher than the three-year historical average, then the entire base regular payroll is considered incremental in FERC Account 186.

2. Overtime Payroll – Amounts in this category represent overtime payroll for employee time spent in direct support of storm restoration for DEF personnel as well as DE affiliates, such as linemen from DE affiliates in the Carolinas and Midwest. To identify the non-incremental amount, the three-year historical average (September of 2016-2018) of non-storm O&M base overtime payroll is compared to the actual non-storm amount charged to O&M base overtime payroll in September 2019 for T&D. If the average is higher than the amount incurred in September 2019, that difference is removed from FERC Account 186 as the non-incremental amount and charged to Income Statement O&M. If the amount incurred in September 2019 is higher than the three-year historical average, then the entire base overtime payroll is considered incremental in FERC Account 186.

3. Labor Burdens/Incentives – Amounts in this category include employee bonuses and labor burdens.

Bonuses paid to employees for their extraordinary efforts and dedication to DEF's customers were removed from this recovery request. Note, while the Company believes the bonuses paid to employees are properly recoverable, DEF is not seeking recovery of those costs.

Labor burdens represent costs associated with direct payroll and overtime charges, such as 401-K and pension match, medical, payroll tax, and other benefits. To identify the non-incremental amount, the three-year historical average (September of 2016-2018) of non-storm labor burdens is compared to the actual non-storm amount charged to O&M in September 2019 for T&D. If the average is higher than the amount incurred in September 2019, that difference is removed from FERC Account 186 as the non-incremental amount and charged to Income Statement O&M. If the amount incurred in September 2019 is higher than the three-year historical average, then all labor burdens are considered incremental in FERC Account 186.

4. Overhead Allocations – Amounts in this category include cost allocations related to management and supervision as well as Service Company costs that were allocated to the project based on payroll, overtime, materials, contractors

and fleet charges incurred. Costs associated with DEF employees were removed as either non-incremental or included as part of capital.

5. Employee Expenses – Amounts in this category include the cost of lodging such as hotel rooms, as well as other employee expenses such as meals and mileage reimbursement for employees using their personal vehicles.

6. Contractor Costs – Amounts in this category include costs associated with mutual aid utilities, line contractors, vegetation contractors, staging and logistics personnel and other outside contractors used in storm-restoration related activities.

7. Materials and Supplies – Amounts in this category include the materials and supplies used to repair and restore service and facilities to pre-storm condition, and exclude the portion of materials and supplies used in restoration activities that are included in capitalized cost. Fuel costs associated with fueling services utilized during restoration to re-fuel contractor vehicles are coded as part of materials and supplies.

8. Internal Fleet Costs – The costs included in the net recoverable request are only the fuel for fleet vehicles.

9. Uncollectible Account Expenses – Refer to the section below regarding the storm impacts to Customer Operations.

10. Other Expenses – Amounts in this category include other minor amounts of storm-related expenses not coded to one of the categories above.

The Company has support for all storm costs on Exhibit No.___(TM-2) available for Commission review.

Q. Is the Company including for recovery in this filing any costs prohibited from recovery under the ICCA methodology and the Agreement?

A. No. DEF is not including any costs prohibited from recovery under the ICCA methodology or the Agreement. In the preceding section of my testimony, I discussed allowable costs as well as amounts DEF excluded from this recovery request based on DEF's determination that certain of the costs were non-incremental or capitalizable. In this section, I will address the types of costs prohibited for recovery through the storm reserve based on the following sections of Rule 25-6.0143, F.A.C. and the Agreement.

<u>Prohibited costs under the ICCA methodology and the Agreement</u>:

The types of storm related costs prohibited from being charged to the reserve under the ICCA methodology and the Agreement include, but are not limited to, the following:[4]

1. Base rate recoverable regular payroll and regular payroll-related costs for

[4] Rule 25-6.0143(1)(f), F.A.C.; Agreement.

utility managerial and non-managerial personnel

- *Company response – as discussed in the previous section, T&D has excluded from its recovery request the difference between the three-year average and the actual amount incurred in the month of September.*

2. Bonuses or any other special compensation for utility personnel not eligible for overtime pay

- *Company response – as previously discussed, although the Company believes the bonuses paid to employees for their extraordinary efforts and dedication to DEF customers are properly recoverable, DEF is not seeking recovery of those costs in this filing and has removed them from this recovery request.*

3. Base rate recoverable depreciation expenses, insurance costs and lease expenses for utility-owned or utility-leased vehicles and aircraft

- *Company response – DEF has not included these types of costs in this cost recovery filing. Regarding fleet costs, fleet allocations that follow payroll and overtime labor were adjusted to only allow the fuel component to be considered incremental and included for recovery in this filing. The remaining parts of the fleet allocation were considered non-incremental. With respect to aircraft, only direct incremental charges were recorded to the storm project. These costs represent incremental jet and transportation expenses, as well as charter flights when additional aircraft were needed. Other similar incremental expenses that supported*

restoration efforts included Unmanned Aerial Vehicles ("UAV") or Drones expenses and contractor UAV operators, as well as helicopter expenses.

4. Utility employee assistance costs

- *Company response – DEF has not included these types of costs in this cost recovery filing.*

5. Utility employee training costs incurred prior to 72 hours before the storm event

- *Company response – DEF has not included these types of costs in this cost recovery filing.*

6. Utility advertising, media relations or public relations costs, except for public service announcements regarding key storm-related issues as listed above in subparagraph (1)(e)10

- *Company response – DEF has not included these types of costs in this cost recovery filing, except for allowable public service announcements. For example, advertisements that were placed to distribute needed information related to power restoration and/or safety precautions were charged to the storm reserve. This would have included messaging such as how to report power outages and to urge customers not to touch downed power lines. However, advertisements that related to corporate image were not charged to the storm reserve. This would have included*

all "Thank You" ads that were placed.

7. Utility call center and customer service costs, except for non-budgeted overtime or other non-budgeted incremental costs associated with the storm event

- *Company response – DEF has only included non-budgeted overtime and other incremental costs associated with its Customer Operations organization in this cost recovery filing.*

8. T&D Non-Vegetation Management Contractor Costs incurred in any month(s) in which storm damage restoration activities are conducted, that are less than the actual monthly average of native contractor costs charged to operation and maintenance expense for the same month(s) in the three previous calendar years

- *Company response – DEF has performed the necessary calculations required by the Agreement and has properly removed non-vegetation management contactor costs consistent with the Agreement, resulting in recovery amounts that comply with the ICCA methodology.*

9. Tree trimming expenses, incurred in any month(s) in which storm damage restoration activities are conducted, that are less than the actual monthly average of tree trimming costs charged to operation and maintenance expense for the same month(s) in the three previous calendar years

- *Company response – DEF has performed the necessary calculations*

required by this rule and has properly removed vegetation management costs consistent with this rule, resulting in recovery amounts that comply with the ICCA methodology.

10. Utility lost revenues from services not provided

- *Company response – DEF has not included lost revenues in this cost recovery filing.*

11. Replenishment of the utility's materials and supplies inventories

- *Company response – DEF has not included these types of costs in this cost recovery filing.*

Q. Please explain the amounts capitalized to property, plant and equipment by the Company.

A. The ICCA methodology states, ". . . capital expenditures for the removal, retirement and replacement of damaged facilities charged to cover storm-related damages shall exclude the normal cost for the removal, retirement and replacement of those facilities in the absence of a storm."

DEF has a process to ensure all units of property installed during storm restoration are capitalized at reasonable material and labor amounts (i.e., resulting in capital amounts at the normal cost for the removal, retirement and replacement of those facilities), resulting in a storm cost recovery request that is incremental under the

ICCA methodology. During Hurricane Dorian, only the Company's T&D Operations installed capital units of property.

For Transmission Operations, specific projects were issued for capital work, allowing real-time tracking of those projects. As capital work was performed, associated labor, material and equipment costs were charged to the capital projects.

With respect to Distribution Operations, the Company's tracking of materials allows for accounting of all units of property used during storm restoration, resulting in the proper capitalization of those units of property. This is accomplished by having DEF's Supply Chain organization issue materials directly to the storm project when shipped from the distribution center to the various base camps, and by having Supply Chain personnel at Operating Centers issue materials used during the storm to the storm project. Once the restoration effort has been completed, all materials from the base camps were picked up and brought back to the distribution center where they were placed in a specific area for return processing. All returned materials were segregated and tagged to be identified as materials initially charged to the storm restoration. The materials were then returned by applying the same accounting that was used during the restoration effort. As a result, only the actual units installed during storm restoration were capitalized.

Once the number of units of property ("UOP") were confirmed, the Company's Finance organization determined a normal, reasonable total dollar amount to capitalize for those units of property.

- Materials Costs – As noted above, the number of UOP were identified and grouped (e.g., poles, transformers, wire, etc.). The material costs associated with the UOP and the number of UOP then became the basis of the calculation to determine the estimated total capital amount. A material burden was applied to all materials which represents the cost associated with warehousing, handling and shipping, and was reflected in the capital calculation. A working stock burden was also applied for all the ancillary materials needed to install that unit of property.
- Contract Labor - For each grouping of UOP, DEF's Resource Optimization group estimated the average number of hours to install under normal conditions for that type of UOP and number of line resources needed. The average number of hours multiplied by the number of resources generated the total hours to install that UOP. Then a simple average was calculated of internal labor and native contractor rates and that rate was multiplied by the number of hours for each UOP to come up with the estimated capital labor to install.
- Other costs – As part of the normal amount of capital cost for a UOP, an overhead allocation rate was applied based on the total number of estimated hours to install the units of property. This overhead rate is consistent with the rate used in DEF's work management system – Maximo.

For each storm, the amount of storm costs capitalized is outlined in Exhibit No. __ (TM-2).

Q. In addition to T&D, please describe the other functional areas that incurred costs related to the storms.

A. Customer Operations incurred incremental costs that include the same categories of costs as T&D. Customer Operations did not follow the same process as described above for T&D, however; only incremental costs as defined under the ICCA methodology are requested for recovery in this filing.

Q. Please explain why there could be further adjustments to the costs for which DEF is seeking recovery in this filing.

A. As of the date of this filing, the Company has not yet finalized payment of all contractor services related to Hurricane Dorian. The Company reserves the right to file supplemental schedules with any necessary adjustments with the Commission as appropriate.

Q. Does this conclude your testimony?

A. Yes.

Duke Energy Florida, LLC
Storm Cost Recovery Total
Cost Summary - Hurricane Dorian & Tropical Storm Nestor
($000's)

Line No.	Description	Reference	Incremental Storm Cost	
1	Recoverable Restoration Costs - Retail			
2	Dorian	Exhibit TM-2, Page 1, Line 29	$144,414	
3	Nestor	Exhibit TM-2, Page 2, Line 29	153	
4	Total Recoverable Restoration Costs - Retail	Line 2 + Line 3		144,567
5	Interest on Unamortized Storm Restoration Cost Balance			376
6	Retail Storm Recovery Amount Before Regulatory Assessment Fee			144,943
7	Regulatory Assessment Fee Multiplier			1.00072
8	Total Retail Storm Recovery Amount	Line 6 * Line 7		$145,048

Duke Energy Florida, LLC
Storm Cost Recovery
Cost Summary - Hurricane Dorian
($000's)

Line No.	Description		Estimated Storm Costs By Function						Total	
			Transmission	Distribution	Generation Base	Generation Intermediate	Generation Peaking	Customer Service		
1	**Pre-Storm Reserve Balance**								0	[a]
2	**Storm Related Restoration Costs - Dorian**									
3	Regular Payroll		732	1,469				55	2,255	
4	Overtime Payroll		526	2,611				185	3,322	
5	Labor Burdens/Incentives		611	2,200				125	2,937	
6	Overhead Allocations		50	358				16	424	
7	Employee Expenses		1,074	562				96	1,732	
8	Contractor Costs		8,354	130,095				6	138,455	
9	Materials & Supplies		118	3,504				16	3,638	
10	Internal Fleet Costs		22	133				-	155	
11	Uncollectible Account Expenses		-	-				-	-	
12	Other		-	-				65	65	
13	**Subtotal - Storm Related Restoration Costs**	Lines 3:12	**11,487**	**140,931**	**-**	**-**	**-**	**564**	**152,982**	
14	**Less: Estimated Non-Incremental Costs - Dorian**									
15	Regular Payroll		(144)	(817)				(11)	(972)	
16	Overtime Payroll		(50)	(459)					(509)	
17	Labor Burdens/Incentives		(96)	(754)				(29)	(879)	
18	Overhead Allocations		(3)	(355)				(16)	(374)	
19	Employee Expenses		-	-					-	
20	Contractor Costs		-	(1,631)					(1,631)	
21	Materials & Supplies		-	(41)					(41)	
22	Internal Fleet Costs		(0)	(39)					(39)	
23	Uncollectible Account Expenses		-	-					-	
24	Other		-	-				(65)	(65)	
25	**Subtotal - Estimated Non-Incremental Costs**	Lines 15:24	**(294)**	**(4,094)**	**-**	**-**	**-**	**(121)**	**(4,510)**	
26	Less: Capitalizable Costs		(121)	(38)				-	(159)	
27	**Total Recoverable Restoration Costs - Dorian - System**	Lines (13 + 25 + 26)	**11,072**	**136,799**	**-**	**-**	**-**	**443**	**148,314**	
28	Jurisdictional Factor (Order PSC-2017-0451-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
29	**Total Recoverable Restoration Costs - Dorian - Retail**	Lines (27 x 28)	**$7,773**	**$136,198**	**$0**	**$0**	**$0**	**$443**	**$144,414**	
30	Interest on Unamortized Storm Restoration Cost Balance								376	
31	**Retail Storm Recovery Amount before Regulatory Assessment Fee**								**$144,790**	
32	Regulatory Assessment Fee Multiplier								1.00072	
33	**Total Retail Storm Recovery Amount**								**$144,894**	

Notes:
[a] - The Storm Reserve was depleted after Hurricane Irma and Nate. See Order No. PSC-2019-0232-AS-EI.

Duke Energy Florida, LLC
Storm Cost Recovery
Cost Summary - TS Nestor
($000's)

Line No.	Description		(A) Transmission	(B) Distribution	(C) Generation Base	(D) Generation Intermediate	(E) Generation Peaking	(F) Customer Service	(G) Total	
			Estimated Storm Costs By Function							
1	**Pre-Storm Reserve Balance**								0	[a]
2	**Storm Related Restoration Costs - Nestor**									
3	Regular Payroll		-	39				-	39	
4	Overtime Payroll		5	260				-	265	
5	Labor Burdens/Incentives		2	99				-	101	
6	Overhead Allocations		-	1				-	1	
7	Employee Expenses		0	22				-	22	
8	Contractor Costs		24	142				-	166	
9	Materials & Supplies		0	1				-	1	
10	Internal Fleet Costs		-	15				-	15	
11	Uncollectible Account Expenses		-	-				-	-	
12	Other		-	-				-	-	
13	**Subtotal - Storm Related Restoration Costs**	Lines 3:12	**31**	**578**	**-**	**-**	**-**	**-**	**609**	
14	**Less: Estimated Non-Incremental Costs - Nestor**									
15	Regular Payroll		-	(39)				-	(39)	
16	Overtime Payroll		-	(260)				-	(260)	
17	Labor Burdens/Incentives		(0)	(16)				-	(16)	
18	Overhead Allocations		-	(1)				-	(1)	
19	Employee Expenses		-	-				-	-	
20	Contractor Costs		-	(118)				-	(118)	
21	Materials & Supplies		-	-				-	-	
22	Internal Fleet Costs		-	(13)				-	(13)	
23	Uncollectible Account Expenses		-	-				-	-	
24	Other		-	-				-	-	
25	**Subtotal - Estimated Non-Incremental Costs**	Lines 15:24	**(0)**	**(446)**	**-**	**-**	**-**	**-**	**(446)**	
26	Less: Capitalizable Costs		-	-				-	-	
27	**Total Recoverable Restoration Costs - Nestor - System**	Lines (13 + 25 + 26)	**31**	**132**	**-**	**-**	**-**	**-**	**163**	
28	Jurisdictional Factor (Order PSC-2017-0451-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
29	**Total Recoverable Restoration Costs - Nestor - Retail**	Lines (27 x 28)	**$22**	**$131**	**$0**	**$0**	**$0**	**$0**	**$153**	
30	Interest on Unamortized Storm Restoration Cost Balance								0	
31	**Retail Storm Recovery Amount before Regulatory Assessment Fee**								**$153**	
32	Regulatory Assessment Fee Multiplier								1.00072	
33	**Total Retail Storm Recovery Amount**								**$153**	

Notes:
[a] - The Storm Reserve was depleted after Hurricane Irma and Nate. See Order No. PSC-2019-0232-AS-EI.

Duke Energy Florida, LLC
Storm Cost Recovery
Interest Calculation
($000's)

Line No.	Description	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Total
1	Unrecovered Eligible Costs - Beg Bal	144,671	132,874	118,860	105,789	90,456	72,686	55,455	38,061	22,552	10,564	
2	Less: Current Month Amortization [a]	(12,015)	(14,133)	(13,078)	(15,341)	(17,778)	(17,237)	(17,399)	(15,512)	(11,990)	(11,805)	(146,288)
3	Unrecovered Eligible Costs Before Interest	132,656	118,741	105,782	90,448	72,678	55,449	38,056	22,549	10,563	(1,241)	
4	Monthly Average Eligible Costs	138,664	125,807	112,321	98,118	81,567	64,067	46,756	30,305	16,557	4,661	
5	Average Interest Rate [b]	1.885%	1.135%	0.070%	0.095%	0.115%	0.115%	0.115%	0.115%	0.115%	0.115%	
6	Monthly Average Interest Rate	0.157%	0.095%	0.006%	0.008%	0.010%	0.010%	0.010%	0.010%	0.010%	0.010%	
7	Monthly Interest	218	120	7	8	8	6	5	3	2	0	376
8	Unrecovered Eligible Costs - End Bal [c]	132,874	118,860	105,789	90,456	72,686	55,455	38,061	22,552	10,564	(1,241)	

Notes:

[a] Mar 2020 to Aug 2020 based on billed kWh storm charge sales. Sep 2020 forward based on estimated billed kWh sales. Storm Charge revenues allocated to the amortization of unrecovered eligible restoration costs.

[b] Mar 2020 to Aug 2020 interest is calculated at the commercial paper rate consistent with that used in the Fuel Cost Recovery Clause. The rates are in Schedule A2, Page 2 of 2, Line D8, as filed in Docket 20200001-EI. Sep 2020 forward is calculated based on the Aug 2020 rate.

[c] DEF estimates that Dorian/Nestor restoration costs will be fully recovered in December 2020, however the Interim Storm Charge could remain in effect until February 2021 depending on actual revenues collected.