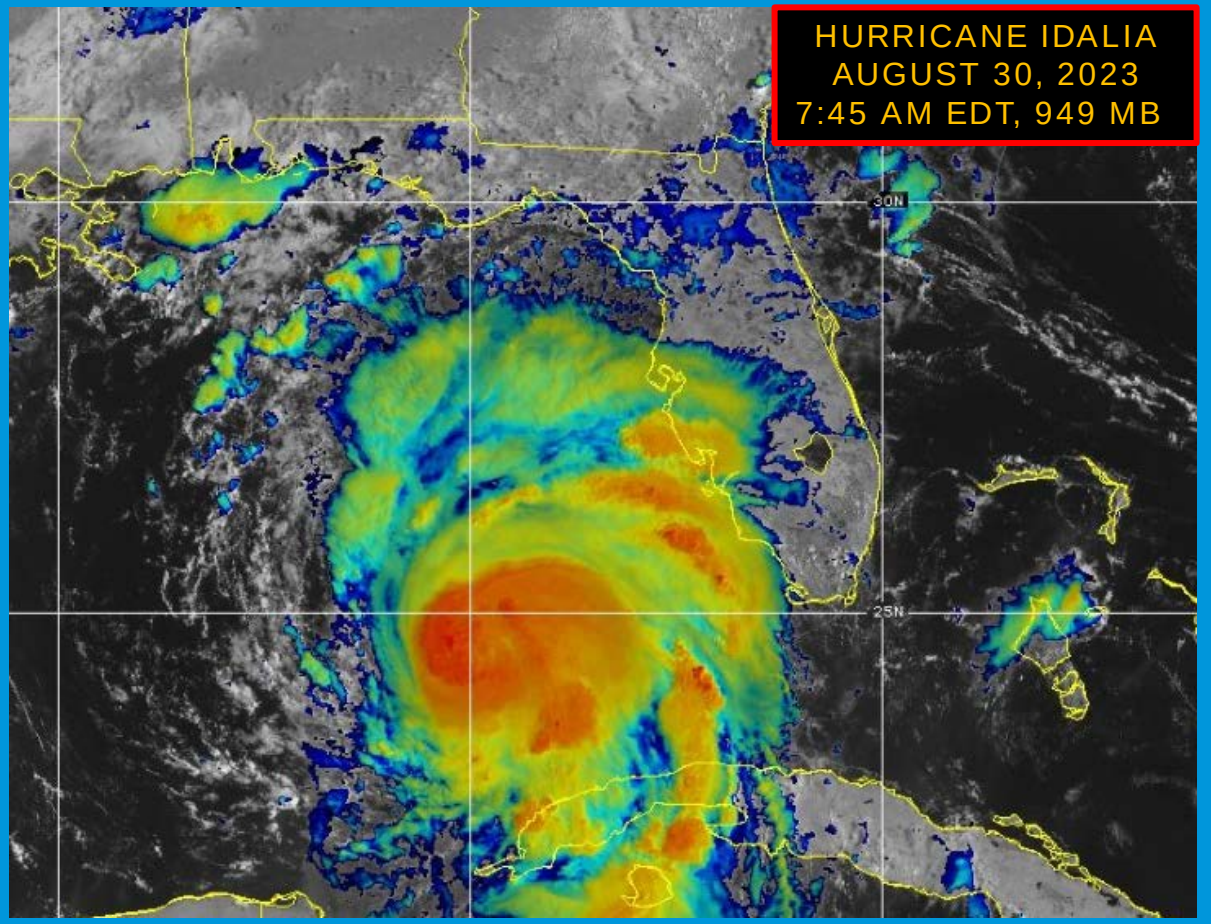
State of Florida
Public Service Commission
HURRICANE PREPAREDNESS WORKSHOP
Tuesday – May 21, 2024
Immediately Following Internal Affairs
Room 105 – Gerald L. Gunter Building

1. Florida Power and Light Company, Armando Pimentel, President and CEO (Attachment 1)
2. Florida Public Utilities Company, Kevin Walz, Regional Manager Operations (Attachment 2)
3. Florida Municipal Electric Association, Amy Zubaly, Executive Director (Attachment 3)
4. Tampa Electric Company, Archie Collins, President and CEO (Attachment 4)
5. Florida Electric Cooperatives Association, Mike Bjorklund, Executive Vice President and General Manager (Attachment 5)
6. Duke Energy Florida, Melissa Seixas, State President (Attachment 6)

OUTSIDE PERSONS WISHING TO ADDRESS THE COMMISSION ON ANY OF THE AGENDAED ITEMS SHOULD CONTACT THE OFFICE OF THE EXECUTIVE DIRECTOR AT (850) 413-6463.

Attachment 1

FPSC Hurricane Preparedness Workshop



Armando Pimentel
President and CEO
May 21, 2024

FPL serves more than half of Florida's population

5.9 million customers

43 counties served

35,550 square miles

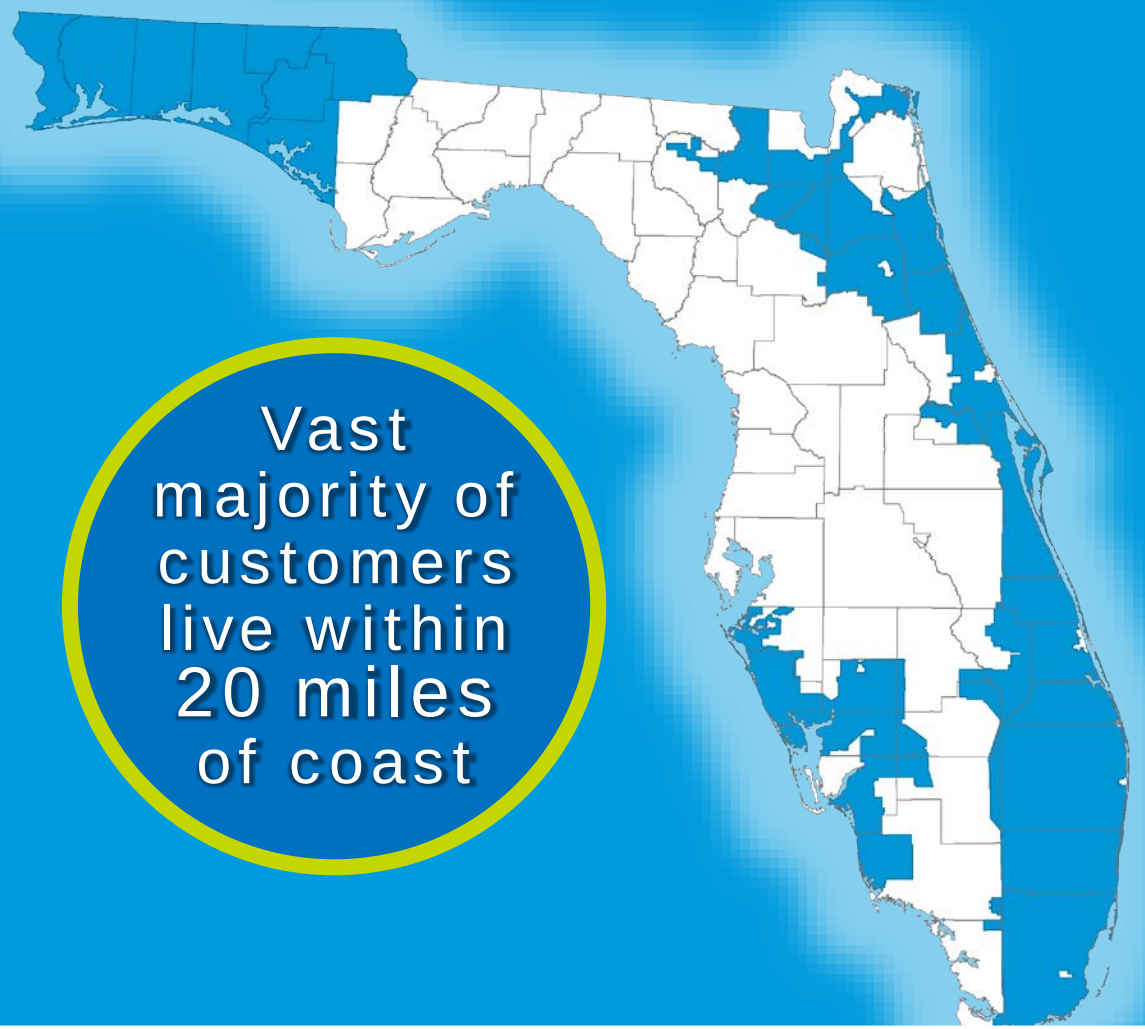
80,422 miles of distribution lines

9,487 miles of transmission lines

1.4 million poles

1.1 million transformers

883 substations



Topics for Discussion

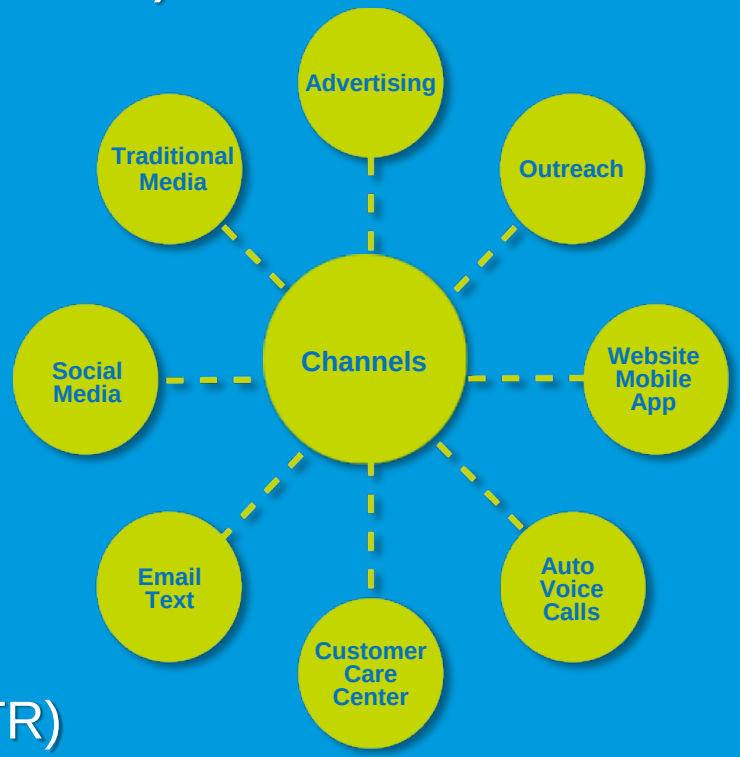
- Storm Preparation and Restoration Processes
- Customer/Stakeholder Outreach and Communication
- Vegetation Management
- Pole / Structure Inspections
- 2023 Storm Season and Mutual Aid

Storm Preparation and Restoration Processes

- **FPL prepares year-round for storm season**
  - Corporate-wide storm dry-run: week of May 6-10
    - Engage key partners at both the local and national level
    - Pressure test technology improvements and evaluate storm damage forecasting/planning/restoration processes
    - Incorporate lessons learned from previous storms
  - Conduct incident management training workshops for all critical storm response roles
- **We work with our fellow utilities in Florida and across the country**
  - Southeastern Electric Exchange (SEE)
  - Edison Electric Institute (EEI)
  - Florida Electric Power Coordinating Group, Inc. (FCG)
  - Association of Edison Illuminating Companies (AEIC)
  - Pre-negotiate contracts with restoration vendors

Customer/Stakeholder Outreach and Communication

- **Use traditional and digital channels/methods to communicate key messages to customers and stakeholders – before, during, and after a storm**
  - News releases and news conferences
  - Media interviews in hardest-hit areas
  - Social media and targeted advertisements
  - Regular updates on the website and FPL app
  - Customer emails, phone calls and text messages
  - Storm-specific Customer Care Center messaging
  - Send Community Action Teams to the hardest-hit areas



- **Key messages may include:**
  - Restoration progress and Estimated Times of Restoration (ETR)
  - Relevant safety messages
  - How customers can stay informed

Customer/Stakeholder Outreach and Communication

- **Provide daily emails/updates to Government Portal website (where applicable) – includes localized outage/restoration info**
- **Conducting annual storm preparedness meetings with county EOCs**
  - Establishing 2024 plans for support at county EOCs, including staffing of embedded FPL employees at EOCs during events
  - Updating the Critical Infrastructure Facility and priority list
- **Continuing customer outreach meetings/presentations**
  - More than 1,000 presentations annually
  - Presentations cover various topics (e.g., storm readiness and Right Tree Right Place)
- **FPL provides information on how to safely operate private generation systems (generators and private solar systems) after a power outage**

FPL's Storm Protection Plan (SPP) improves resiliency across our entire transmission and distribution grid

- **FPL has been hardening its system for two decades**
- **The SPP Statute was approved in 2019, and requires utilities to develop and implement hardening plans to reduce restoration costs and outage times**
- **FPL's FPSC-approved SPP includes the following eight programs:**
  - Distribution Inspection Program
  - Transmission Inspection Program
  - Distribution Feeder Hardening Program
  - Distribution Lateral Hardening Program
  - Transmission Hardening Program
  - Distribution Vegetation Management Program
  - Transmission Vegetation Management Program
  - Substation Storm Surge/Flood Mitigation Program

Vegetation Management

- **Distribution**
  - Feeders: 3-year avg. cycle (+ mid-cycle maintenance)
  - Laterals: 6-year avg. cycles
  - Miles maintained (2023)
    - Feeders: 13,095 miles (4,452 cycle; 8,643 mid-cycle)
    - Laterals: 3,944 miles
  - Before peak of storm season – inspect/maintain Critical Infrastructure Facilities (CIFs)

- **Transmission**
  - Inspect and Protect Program
    - Inspect right-of-way at least two times per year
    - Maintain clearances (2023): 9,370 miles
    - Meet mandatory NERC-established requirements
  - Before peak of storm season – perform aerial patrols

Pole/Structure Inspections

- **1.4 million distribution poles**
  - 8-year inspection cycle
  - In 2023 – 180,261 total poles inspected
    - Wood: 157,028 poles
    - Concrete: 23,233 poles
- **83,295 transmission structures**
  - 100% annual visual inspection
  - Detailed inspection cycles:
    - Wood: 6-year cycle
    - Concrete/steel: 10-year cycle
  - ~96% of FPL"s transmission structures have been hardened

2023 Storm Season and Mutual Aid

- **One hurricane affected FPL in 2023**
  - Hurricane Idalia – Aug. 30, 2023
- **Mutual assistance provided in 2023**
  - **March** – Severe Weather
    - West Virginia – AEP
    - Kentucky – LGE-KU
    - Texas – Oncor
  - **July & August** – Severe Weather
    - Georgia
      - Georgia Power
      - Sawnee Electric Membership Corp
  - **September** – Hurricane Idalia
    - Suwannee Valley Electric Co-op
    - Tri-County Electric Co-op

Hurricane Idalia by the Numbers

- **Category 3 storm**
- **Aug. 30 landfall in Big Bend Region**
- **~200K customers impacted**
- **Restoration workforce: 12,000 men and women**
  - From Florida and 16 states
- **All customers essentially restored within 2 days**
  - Nearly 70,000 outages avoided through smart grid technology

What went well

Pre-securing Vault Doors

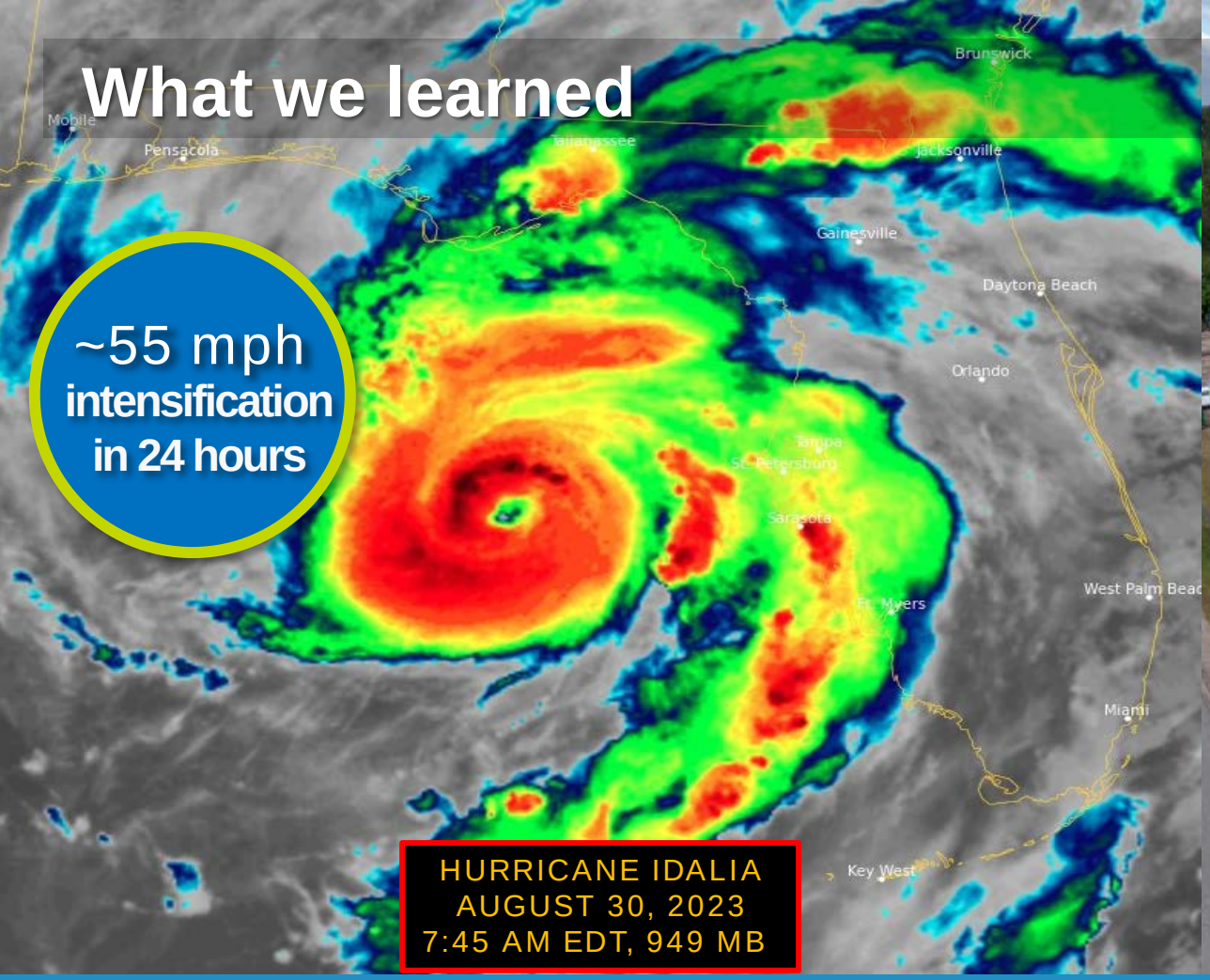
Drone Deployment
Further refined deployment process

Resource Mutual Aid
IOU/ Muni & Co-op collaboration

Night Work
Overnight execution efficiency

Mobile Sleepers
Primary lodging for crews

What we learned



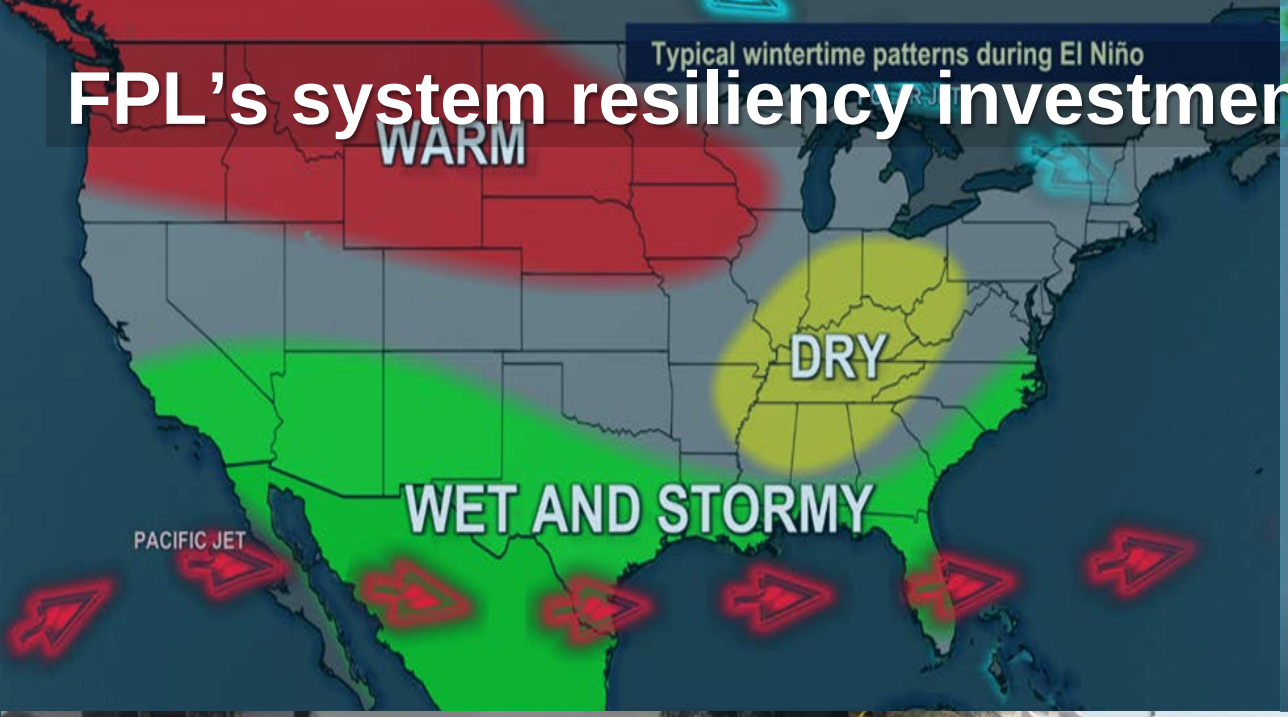
Rapid Intensification

Very difficult to accurately predict

External Crew Processing Efficiency

Internal process review to help eliminate bottlenecks

FPL’s system resiliency investments are tested year-round

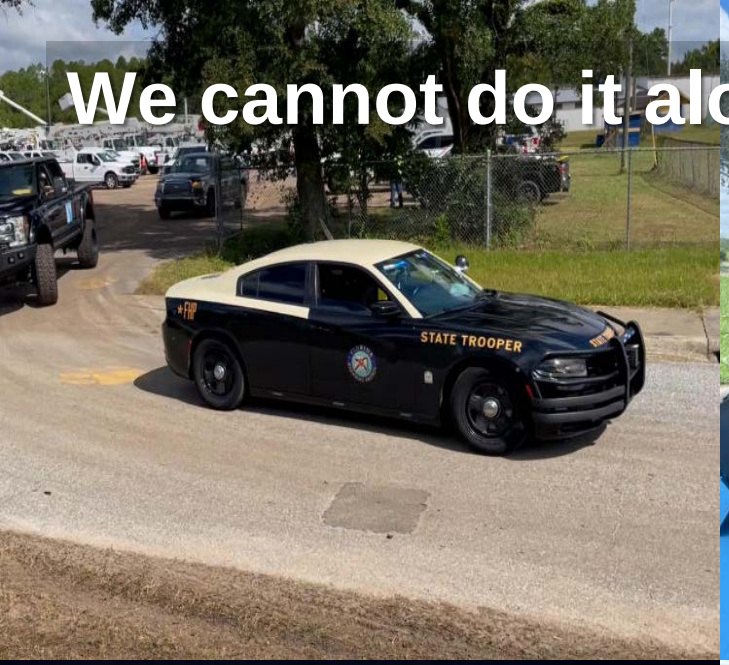


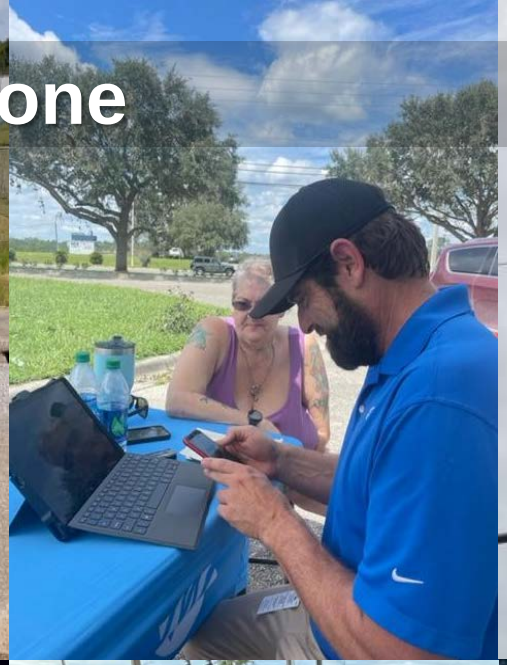
Davie, FL
November 2023

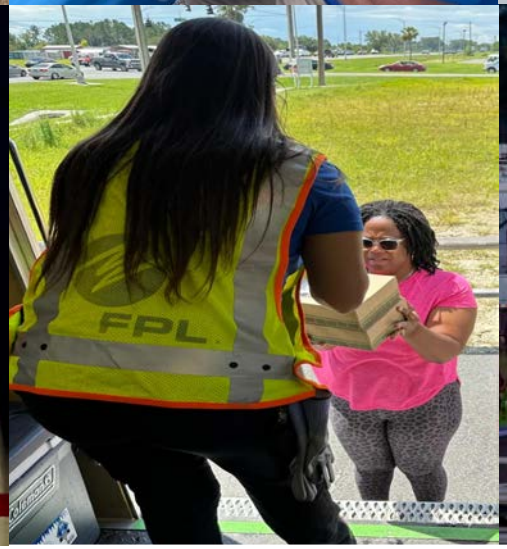
Ft. Lauderdale, FL
December 2023

Panama City, FL
January 2024

We cannot do it alone








FPL®

Attachment 2

Hurricane Preparedness Workshop for 2024

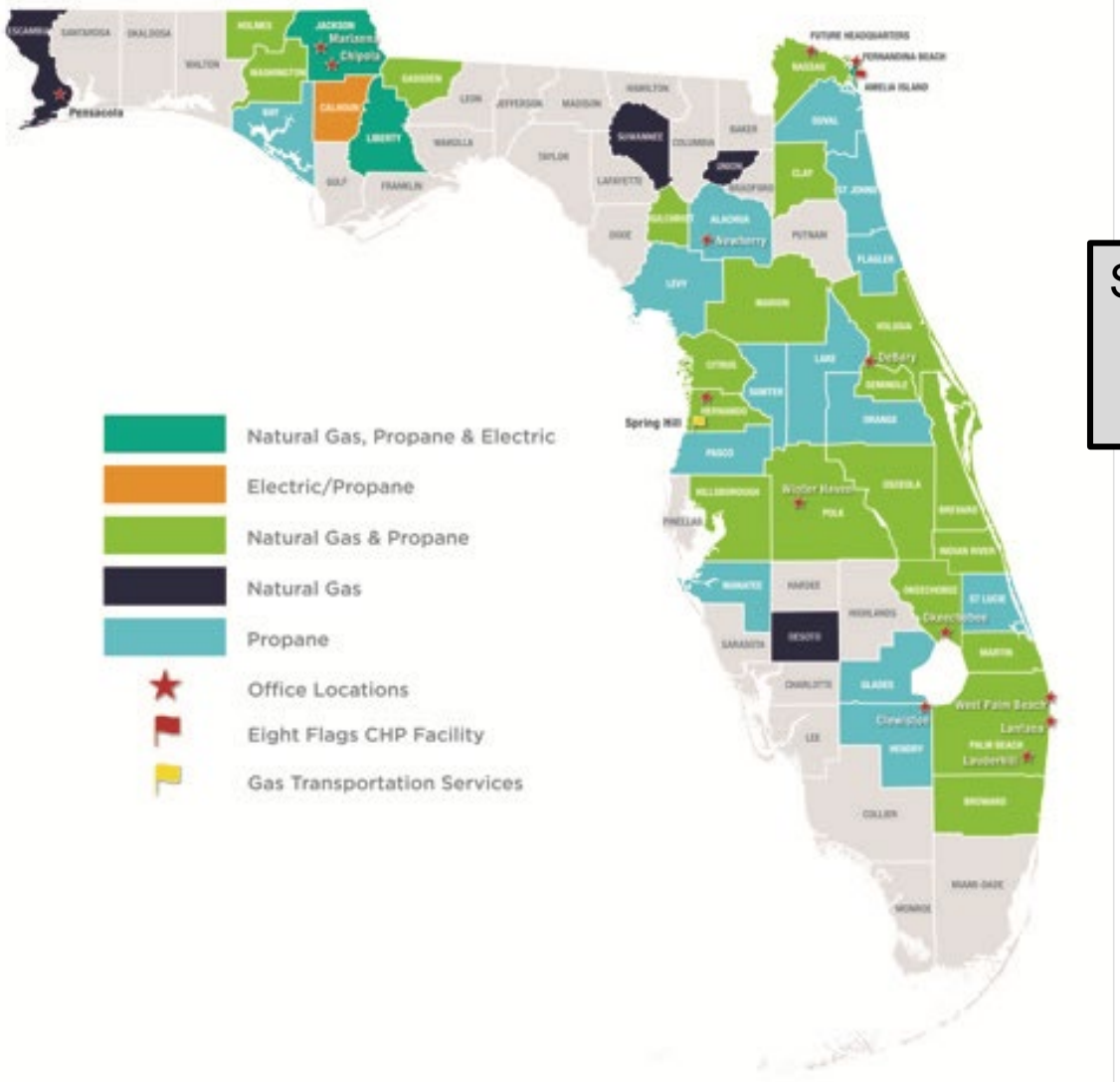
Kevin Walz
Regional Manager, Operations

May 21, 2024

TOP WORK PLACES

FLORIDA PUBLIC UTILITIES

Florida Public Utilities Company Service Areas

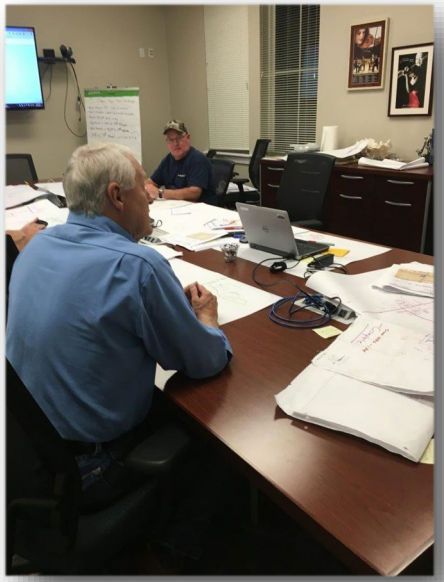


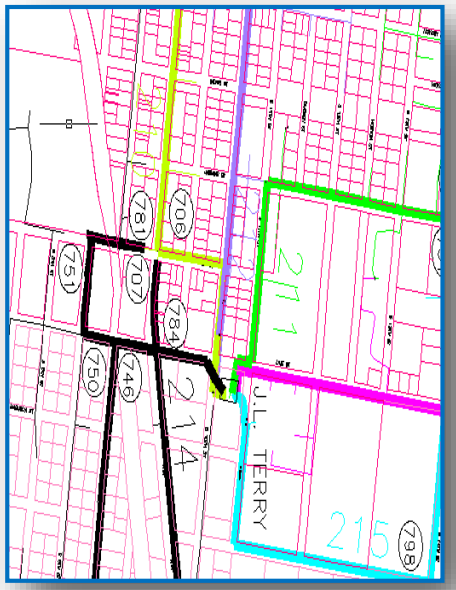
Service territory includes:

- Over 29,956 electric customers.
- 15.8 miles of transmission lines.
- 908 miles of distribution lines.

Overview of Preparation and Restoration Process

Preparation → **Activation** → **Restoration**

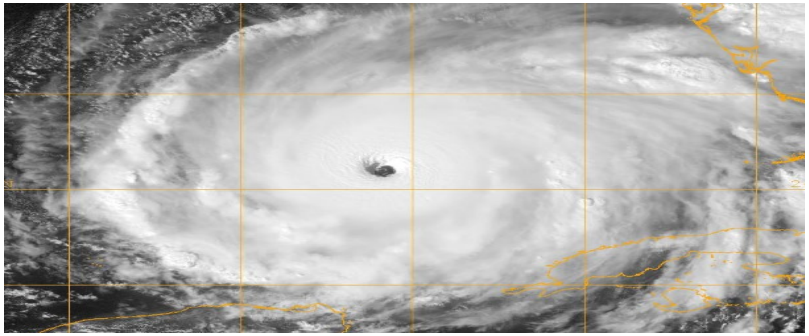




Preparation

Pre-Storm Planning

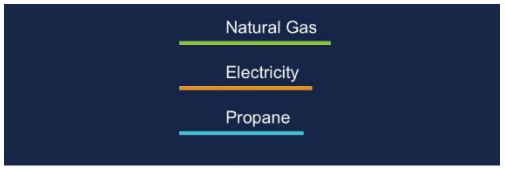
- Culture of preparedness – safety first.
  - Emergency Procedures
  - Working conditions and logistics
  - Customer interfaces
  - Mutual Aid
- Response planning and company wide readiness exercises including electric, natural gas and propane operations.
  - Company wide planning and table top drill scheduled for June, 4th 2024.
  - Focus on lessons learned from Hurricane Michael and other hurricanes
  - Improved procedures in logistics



Preparation

Pre-Storm Planning

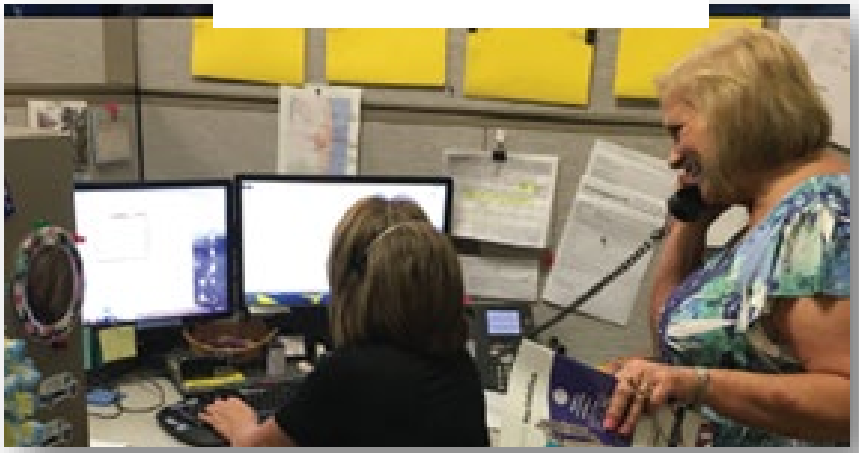
- Customer Outreach Programs
  - Hurricane/Storm Brochures
  - Website Information & Bill Inserts
  - Public Service Announcements
  - Citizens Advisory Council
- Emergency Procedures, Storm and Communication Plans.
- Consider alternative staging options depending on storm path.
- Review staff assignments for Operations, IT and Customer Care.
- Engage with contractors who have signed restoration agreements to ensure their support.



Tropical Storm Nicole Updates

Visit this page for storm-related updates and safety information.

****New updates will be provided as information becomes available****



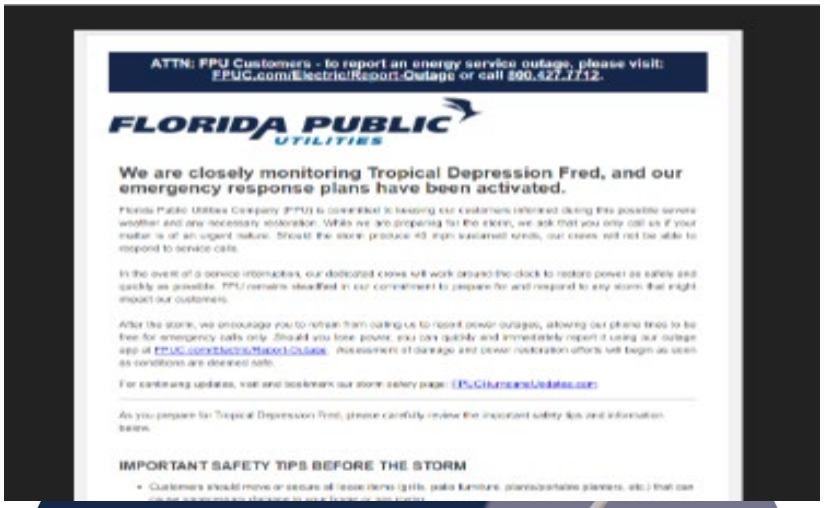
Preparation

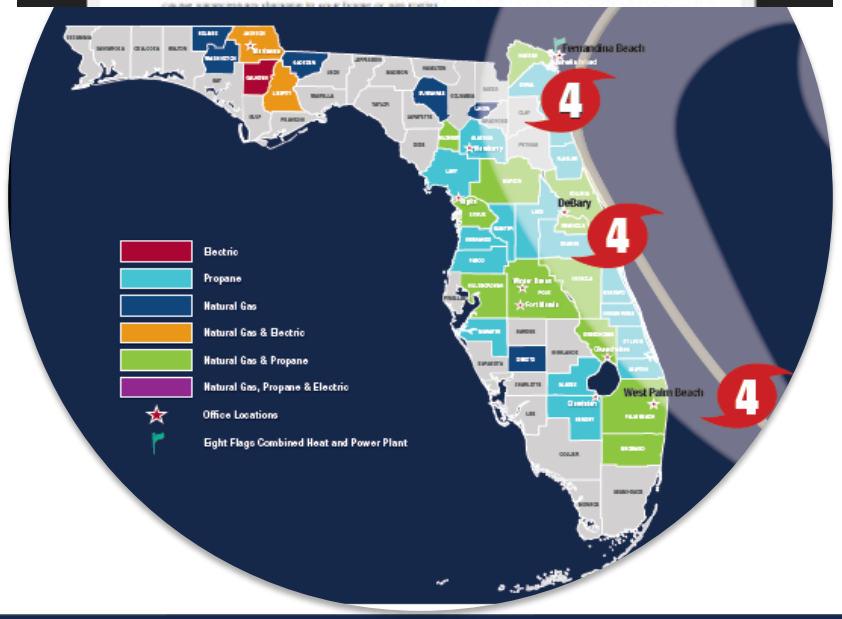
Pre-Storm Planning

- System, facility and inventory inspections
  - Emergency materials and supplies included in emergency plan
  - Emergency items ordered and stocked prior hurricane season (Supply Chain)
- Coordination with city/county/state EOCs and other utilities
  - Ongoing communications with each organization
  - Participation occurs at all meetings
- Participation with the Southeastern Electric Exchange Mutual Assistance Committee
- Mutual Assistance agreements various municipalities within Florida
- Participation in Edison Electric Institute Storm Drills

Activation

Electric, Natural Gas and Propane

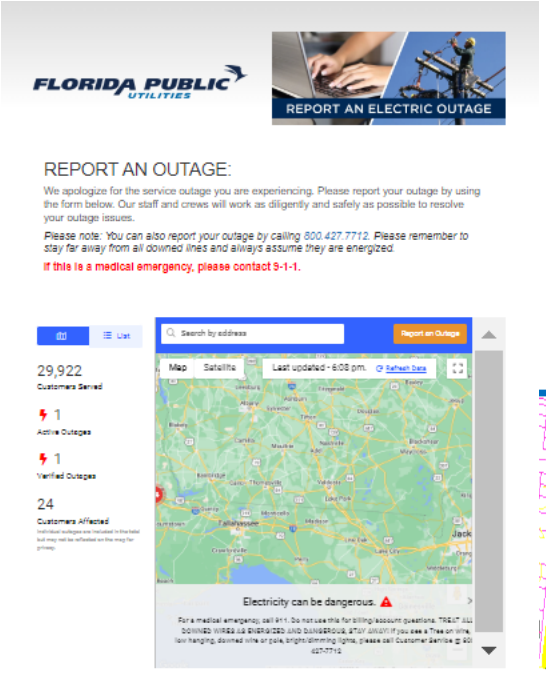


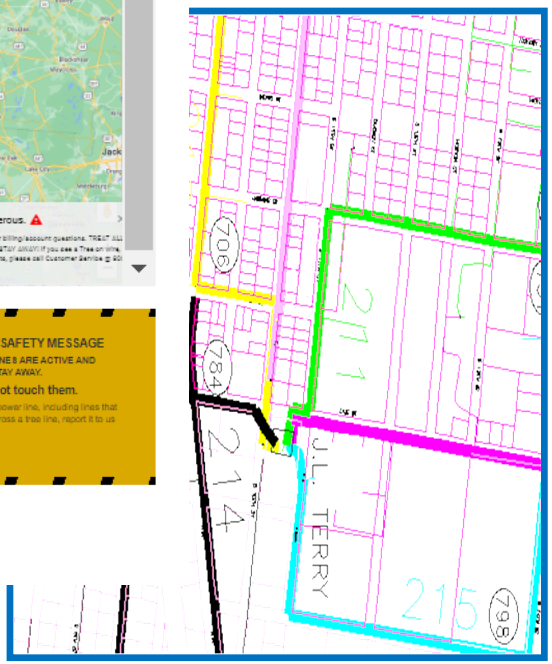


- Storm Watch - initial activation.
- Duties and assignments reviewed.
- Inventory levels, logistics items, meals, hotels and outside vendors confirmed.
- Equipment, fuel and inventory levels checked for readiness.
- Storm Warning – active
- Secure our buildings/facilities.
- Contact county EOCs, other local officials, contractors, and energy partners (SEE).
- Employees activate their family storm plans.
- Redeploy Call Center resources.

Restoration

Systematic Approach



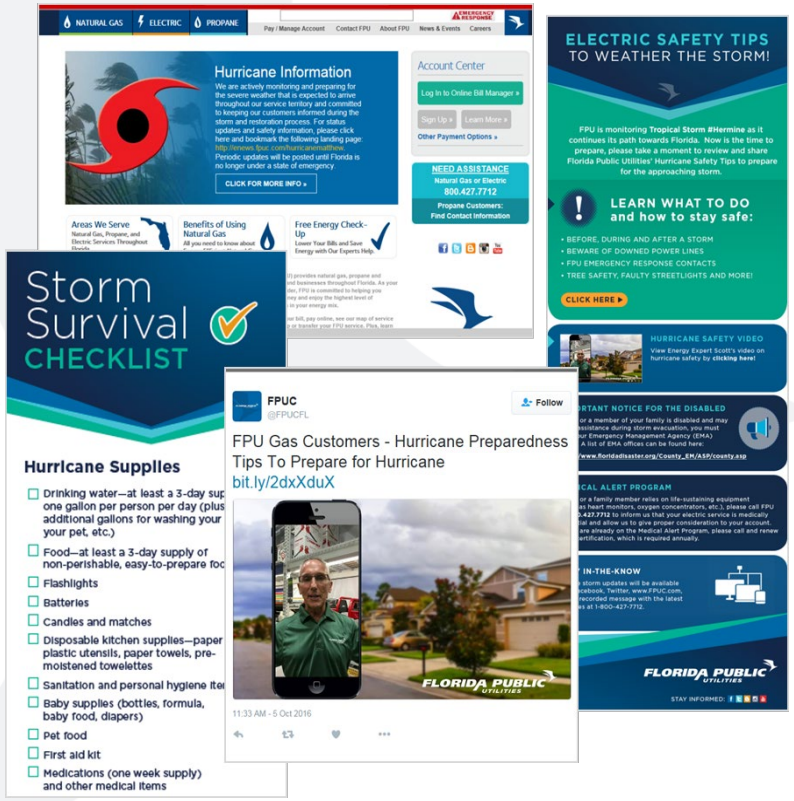


- OMS and SCADA systems organize/prioritize restoration.
- Physical damage survey.
- Team external crews with FPU crew leaders.
- Tree crews sent ahead to remove debris and clear areas.
- Restoration Priority Electric System:
  - Generation (Eight Flags, Inc)
  - Transmission (FPL & JEA connections)
  - Substations
  - Distribution Feeders
- Restoration Priority Customers:
  - Hospitals
  - Police, Fire and EOC
  - Storm Shelters and Elderly Care Facilities
  - Water and Sewer Plants
  - Food Retailers and Restaurants

Customer Communication- Awareness Pre-Storm

In preparation for the storm, FPU publishes watch and warning notifications at the 72, 48 and 12 hour increments to local and national media outlets.

- Bill Inserts
- Print Ads
- Brochures
- IVR Messaging
- Press Releases
- E-Blasts
- Social Media Posts
- Website Updates
- Public Service Announcements

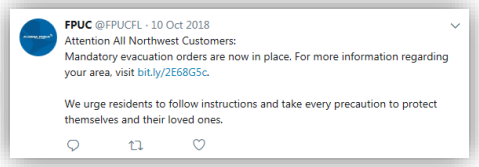


Digital Communications

All Digital Communications Linked to One Main Update Landing Page

FPUC.com and mobile website

Social Media Sites



Storm Hardening

Plans and Initiatives

- Vegetation Management:
  - 2024 Marks the first year of our new 4 year trim cycle for both distribution mains and laterals
  - Four year trim cycle for transmission lines
- Accomplishments in 2023
  - Trimmed 65.22 miles of distribution feeders*
  - Trimmed 98.22 miles of distribution laterals
  - Perform “hot spot” distribution trimming prior to hurricane season. Miles trimmed are included in totals above.

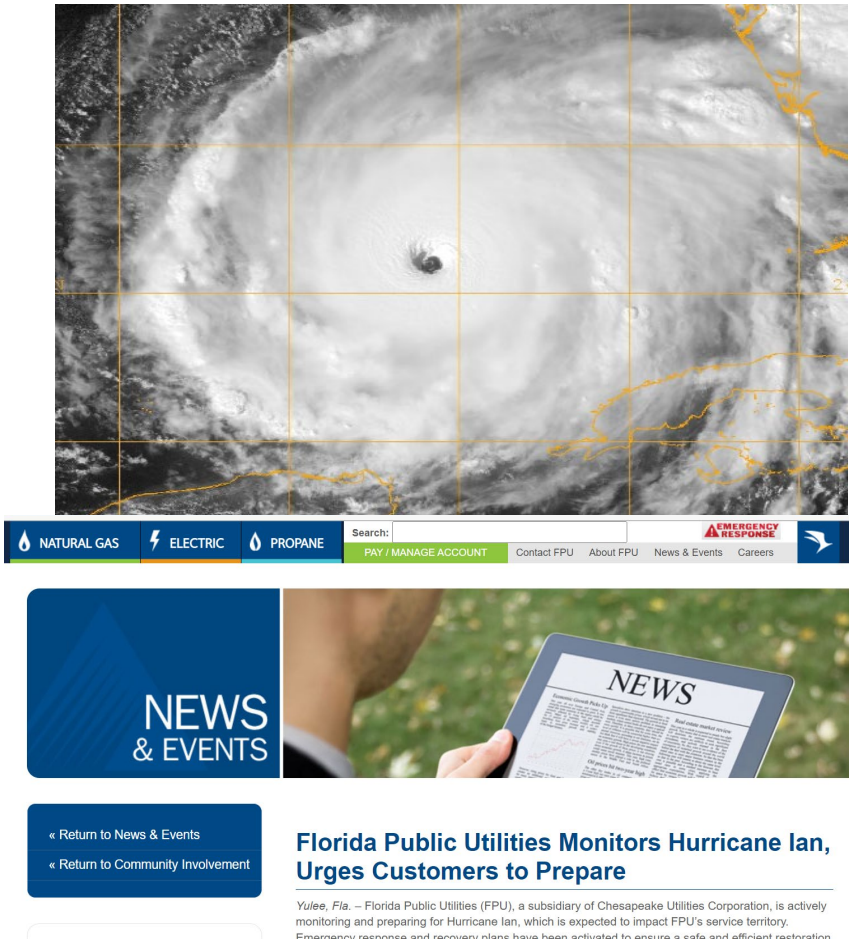
*Includes transmission trimming

Storm Hardening

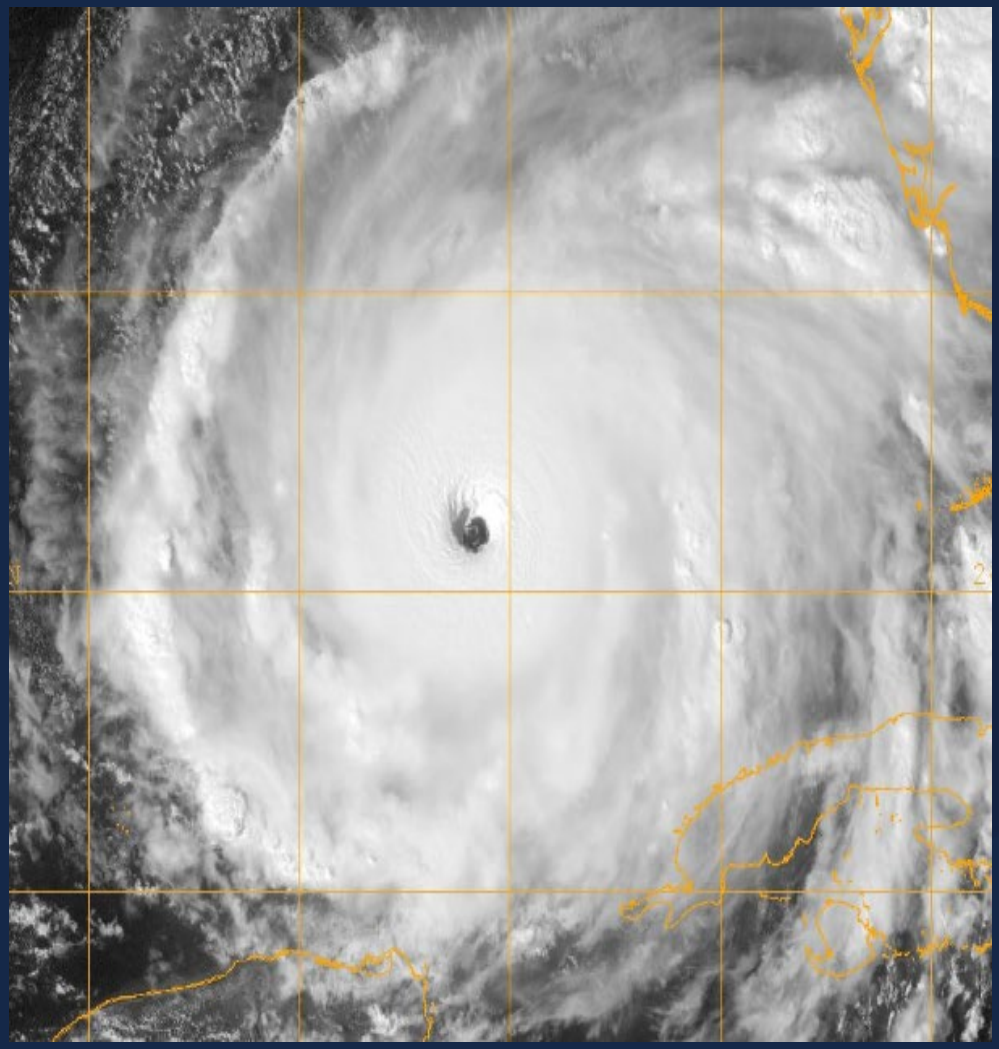
Plans and Initiatives

- Wood Pole Inspection:
  - Eight year cycle (2 total cycles completed)
  - Transmission and Distribution inspections on the same cycle
  - Total poles inspected from beginning this eight year cycle 27,563 (103.08%)
  - Accomplishments in 2023:
    - Total of 3,286 poles inspected.
    - Poles failed 89
    - Failure rate 2.67%
    - Poles replaced 465
  - Poles that need to be replaced in upcoming years 200
- Storm Protection Plan
  - Engineering completed in 2023
  - Construction ongoing in 2024

Improvements Based on Lessons Learned



- Continue to order material earlier due to supply chain disruptions
- Implement more use of drones to use during emergency to take pictures or to survey the area for damage.
- Include record keepers with each crew working to document labor, materials and equipment used during restoration.
- Increase security at offices and staging areas to prevent unauthorized individuals from entry
- Continue to invest in all Storm Protection Plan initiatives
- Continue to invest in technology that advances hurricane prediction and communications.
- Continue to improve GIS,OMS, IVR implementations and other technologies.



Questions?

Kevin Walz
Florida Public Utilities Company
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TOP WORK PLACES

FLORIDA PUBLIC UTILITIES

Attachment 3

Florida Public Power
Hurricane Preparedness and Response
PSC Hurricane Workshop

May 21, 2024

Amy Zubaly
Executive Director
Florida Municipal Electric Association

Florida Public Power

- FMEA = Statewide Trade Association
- 33 municipal electric utilities
- >1.5 million customer meters - ~4 million Floridians
- 14% of Florida's population
- Large Utilities
  - JEA (Jacksonville): 528,000 customers
  - OUC (Orlando): 279,000 customers
  - Lakeland: 137,000 customers
- Small Utilities
  - Moore Haven: 1,093 customers
  - Chattahoochee: 1,121 customers
- Employees ~5,700 Floridians

FLORIDA MUNICIPAL ELECTRIC ASSOCIATION

FMEA Emergency Response Role

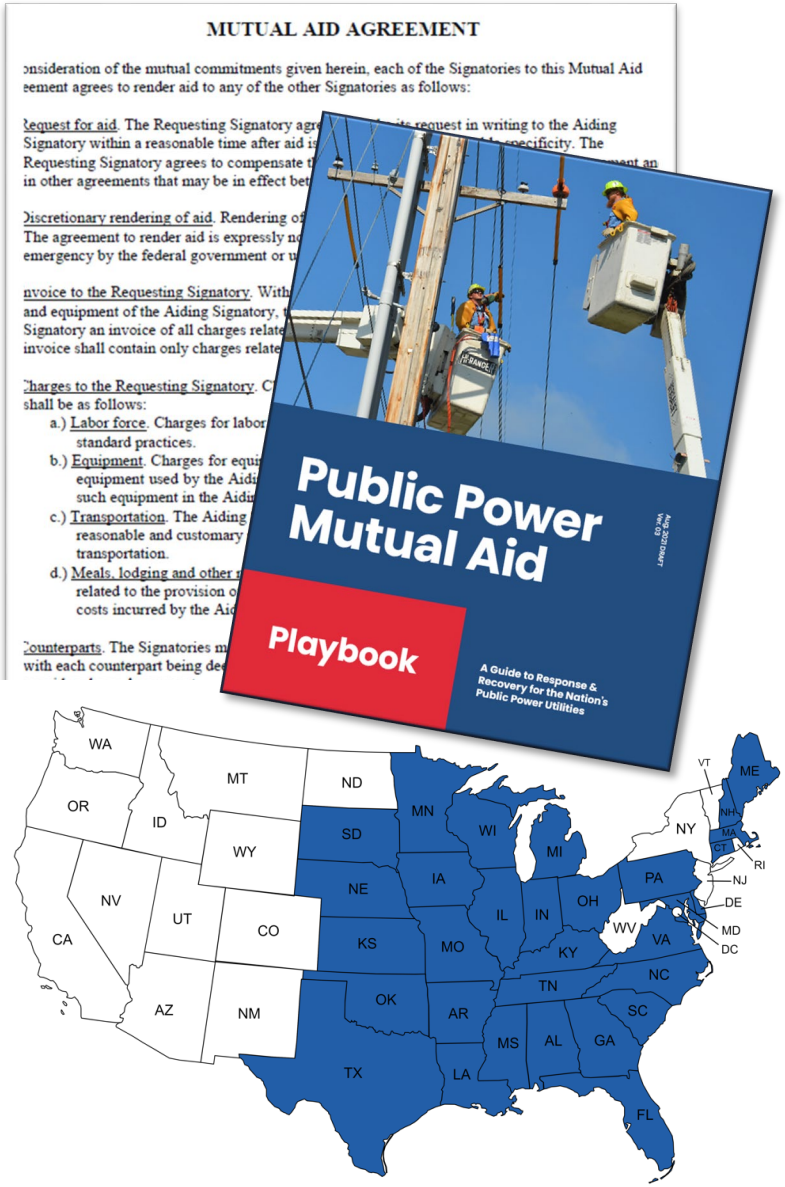
- **FMEA serves as public power statewide mutual aid coordinator**
  - FMEA helps get additional crews and resources to help you restore power
  - FMEA works with other states, through the APPA mutual aid network, and assembles Florida public power crews to help in other areas when there is a need
- **FMEA serves as the liaison between public power and state and federal partners**
  - State Emergency Operations Center
  - Governor's Office
  - Florida Division of Emergency Management
  - Public Service Commission
  - Electric Subsector Coordinating Council
  - U.S. Department of Energy

Hurricane Idalia

Stats and Facts

- Landfall August 30, 2023, as Category 3 hurricane, winds 125 mph.
- Strongest hurricane to make landfall in Big Bend region in more than 125 years.
- More than 288,000 outages, with just over 42,000 from Florida public power.
- Coordinated more than 350 out-of-state mutual aid resources from 23 states.
- All Florida public power customers restored in less than 48 hours.
- More than 300 public power lineworkers went to assist coops and IOUs.

FLORIDA MUNICIPAL ELECTRIC ASSOCIATION



Public Power Mutual Aid

- **APPA/NRECA Mutual Aid Standard Agreement**
  - Municipal utilities have a robust nationwide mutual aid network. The last few storm seasons have seen nearly 30 states provide mutual aid to Florida public power utilities, totaling thousands of mutual aid resources helping to restore power.
  - Signed by all Florida Public Power and all Florida coops
  - Signed by more than 1,600 public power/coops nationwide
  - Initially established in late 90s with input and guidance from FEMA

- **Mutual Aid Assistance Compact**
  - Participants include all Florida's investor-owned and municipal electric utilities, FCG, FMEA and FMPA.
  - Strengthened the provision of mutual aid assistance on a statewide basis between Florida investor-owned and municipal electric utilities.

FLORIDA MUNICIPAL ELECTRIC ASSOCIATION

Resiliency and Reliability Improvements

- Undergrounding distribution lines
- Using drones and infrared technology to inspect lines
- Self-healing technologies – tripsavers, automatic reclosures
- AMI and updating SCADA systems

FLORIDA MUNICIPAL ELECTRIC ASSOCIATION

Tree Trimming and Pole Inspections

- Pole Inspections done on 8-year cycle or less
  - Replacing poles with higher class; concrete; ductile iron
- Vegetation Management
  - Tree trimming done generally on three-year cycle
  - Tree heavy areas increasing setbacks

FMEA
FLORIDA MUNICIPAL ELECTRIC ASSOCIATION

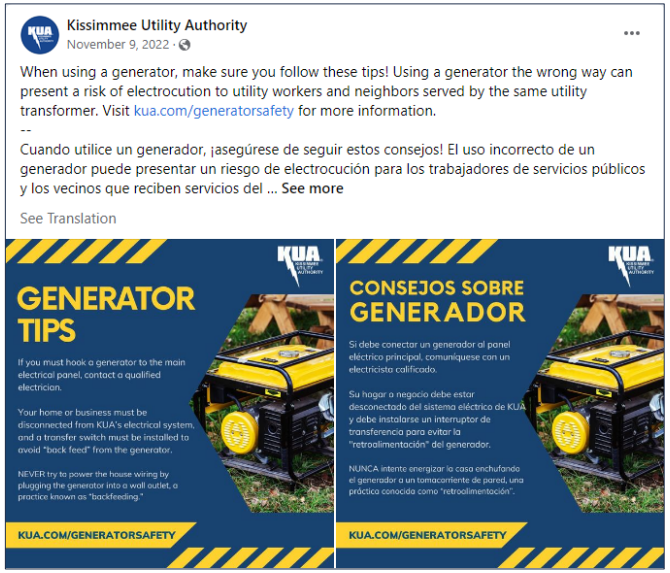
Hurricane Preparedness

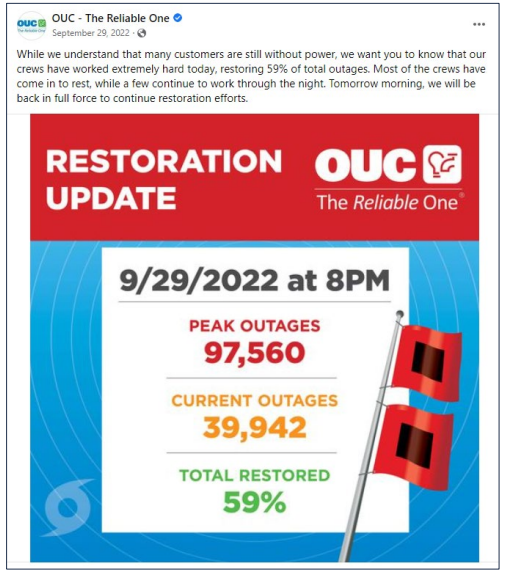
- FMEA holds annual Hurricane and Storm Preparedness Workshop
- Held first ever statewide tabletop hurricane exercise
    - Included FDEM, PSC/EOC, DOE, FEMA
- FMEA participates in national mutual aid tabletop exercise
- Member utilities hold tabletops and simulated exercises – many are held city wide
- Member utilities are active with local EOCs – as entities of local government, our utilities are naturally aligned with their EOCs

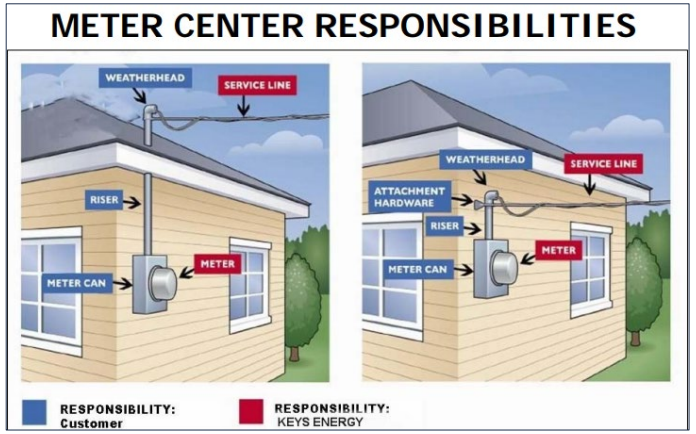
FLORIDA MUNICIPAL ELECTRIC ASSOCIATION

Public Outreach and Communications

- Multiple channels/methods for customer communication
  - Member utilities and local governments issue pre-storm hurricane guides – emphasize safety and preparedness
  - Emergency communications/text alerts – before, during, after
  - Social media – before, during, after
    - Safety – generators, crews
    - Restoration processes/areas of priority
    - ETRs and Outage Updates







FLORIDA MUNICIPAL ELECTRIC ASSOCIATION

Communications – FMEA

- Daily update calls with member utilities to discuss situational awareness, mutual aid, other needs
- Daily calls with our national trade association, mutual aid committee and federal partners (DOE, ESCC)
- Hurricane and storm response website
  - Hurricane communications toolkit with ready made social media posts and graphics
  - Mutual aid guides and sample onboarding documents
  - FEMA resources and guides
- Assist member utilities with social media and outage updates
- Track social posts from external mutual aid partners

FLORIDA MUNICIPAL ELECTRIC ASSOCIATION

Lessons learned and potential obstacles

- Infrastructure improvements and storm hardening is improving reliability and causing fewer outages.
- Logistics are key!
  - Food - contracts in place in advance
  - Lodging – Hotels, community centers, schools – showers, cots
  - Laundry Consider community help
- Supply chain remains a concern, especially for multiple storms.

FLORIDA MUNICIPAL ELECTRIC ASSOCIATION

Questions?

Amy Zubaly
Executive Director
Florida Municipal Electric Association
(850) 251-6200
azubaly@flpublicpower.com

Attachment 4

Hurricane Preparedness Workshop

Florida Public Service Commission Update

Archie Collins
President and CEO
May 21, 2024

TECO
TAMPA ELECTRIC
AN EMERA COMPANY

Our Focus

- We prepare year-round for severe weather.
- We are enhancing assets and leveraging technology to achieve a stronger, smarter grid – an intelligent grid that has improved visibility and enables faster restoration.
- We strive to continuously improve storm preparation and readiness.
- We aim to be good partners – all the time.
- Our employees recognize that customers count on us every minute of every day – and that this responsibility is amplified during storm season.

TECO
TAMPA ELECTRIC
AN EMERA COMPANY

SPP Investments Increase Resilience AND Improve Reliability

- Distribution system is ~52% underground today, with a goal to move ~100 miles of overhead assets in outage prone areas underground each year.
- 89.5% of the transmission system is non-wood – goal is to migrate to 100% in the next few years.
- Raising low lying substations that are located in areas vulnerable to storm surge.
- The vast majority of hurricane related outages are the direct result of tree damage. Over the past couple of years, the vegetation management program has been enhanced – and the improvements are showing up in the day to day reliability performance.

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Vegetation Management

DISTRIBUTION

- Historically maintained a four-year cycle for feeders and laterals.
- However, that has increased in recent years. In 2023, 2,898 miles trimmed.
- 912 hazard trees removed in 2023.

TRANSMISSION

- Two-year cycle on Bulk (230kV, 138kV)
- Three-year cycle on non-Bulk (69kV, 34kV)
- 536 miles trimmed in 2023
- 6,251 acres of right-of-way mowed

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Pole Inspections

DISTRIBUTION

- Eight-year cycle
- 36,601 wood poles inspected
- 1,363 poles ‘failed’
  - 3.24% failure rate
- 787 poles replaced in 2023

TRANSMISSION

- Eight-year cycle
- 448 poles inspected
- 141 poles ‘failed’
- 628 poles replaced

Pole/circuit inspection methods include aerial infrared and ground patrols.

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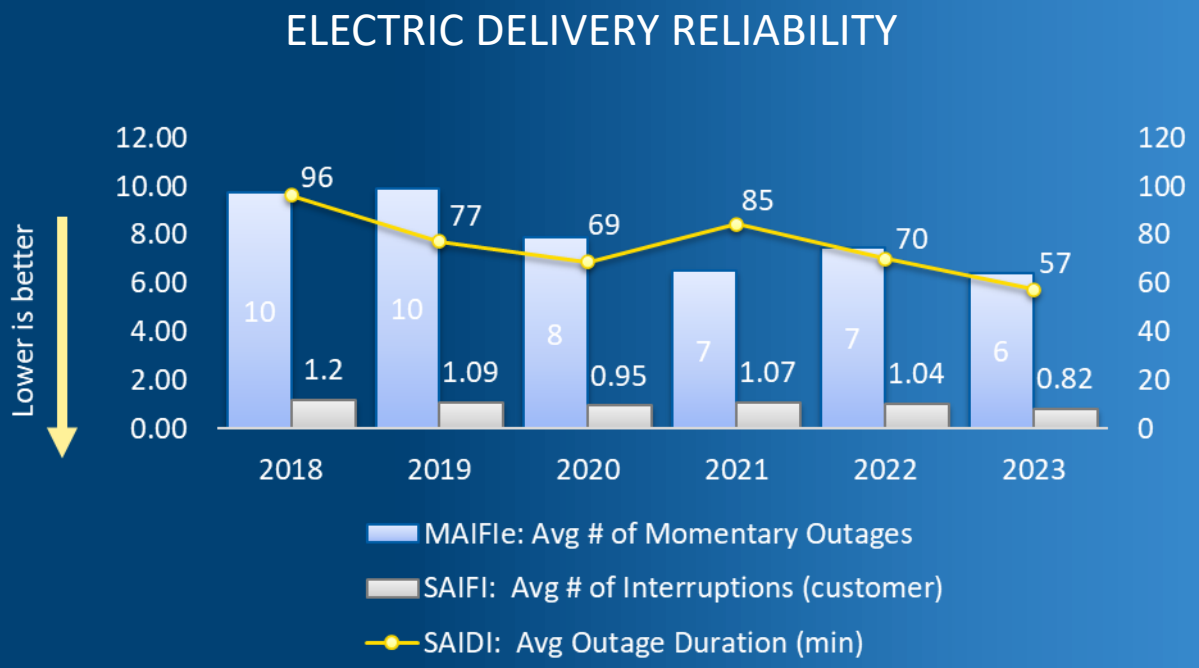
Smart Investments Yield Reliability Improvements



Improvements:
-41% SAIDI
-34% MAIFIe
-32% SAIFI

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Hurricane Ian vs Hurricane Irma

- A comparison of Hurricane Irma (2017) vs Hurricane Ian (2022) provides a good indication of how recent investments have yielded demonstrable customer benefit.
- Despite worse weather during Ian (8.5 hrs of sustained winds exceeding 40 mph winds vs. 1.5 hrs during Irma), restoration for Ian was completed one day quicker.
- SPP hardened circuits experienced 57% less outages during Ian vs Irma.
- There were zero pole or wire failures on all circuits that were hardened via the SPP program.
- Not surprisingly, there were no outages on the laterals that were undergrounded as part of SPP.

Striving For Continuous Improvement

- After all hurricanes – especially recent hurricanes like Idalia and Ian – Tampa Electric performs a post-storm review to identify opportunities to improve. Recent learnings include:
  - Better training is required with internal and external management teams to operate incident bases and base camps.
  - We would benefit from more accurate pre-storm weather information that focuses on storm surge (vs winds only).
- We have implemented the following changes in response:
  - Mobile safety orientation for mutual aid crews is now fully functional.
  - New logistics contracts with third party base camp providers and hotel disaster booking service. This now provides a one-stop shop for accommodations.
  - We have revised Substation operations and engineering storm surge plans.
  - Blue Skies – a Florida based meteorology group – has been retained throughout storm season to improve pre-storm weather data (in addition to our year round service provider).

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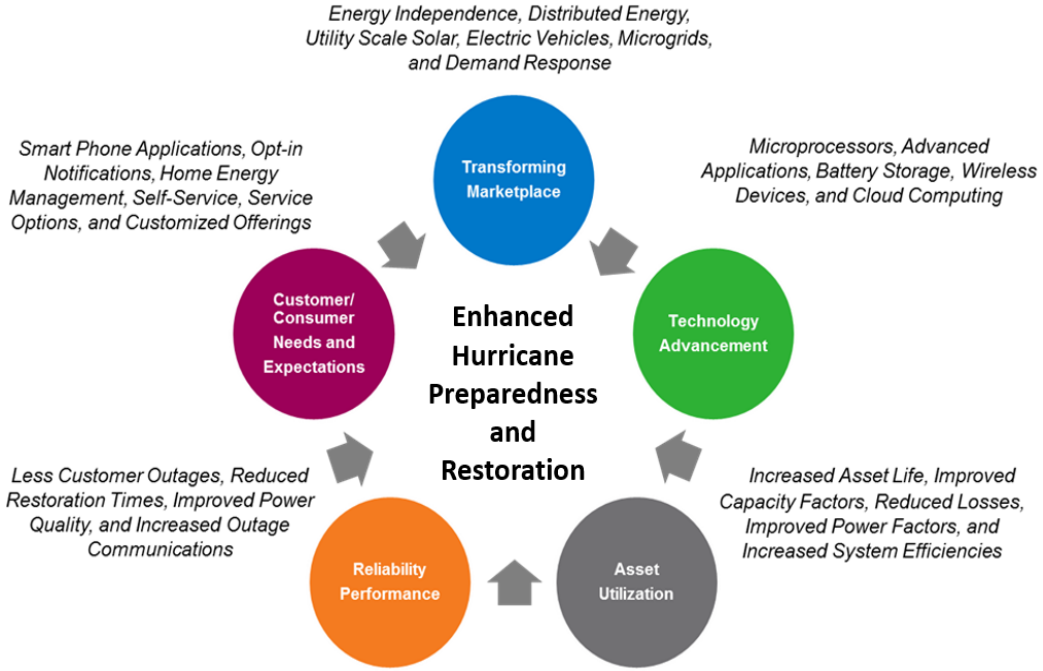
Advanced Distribution Management System Improves Restoration

- 2023 upgrade
- Upgrade effectively provides:
  - ➢ Improved switching orders
  - ➢ Ability to move forward with Distributed Energy Resource Management
  - ➢ Ability to move forward with decentralized dispatching
- Interfaces with power on/power off notifications - eliminating the need for customers to call us.
- Improves our reporting capabilities to Emergency Operation Centers (EOC) and the FPSC



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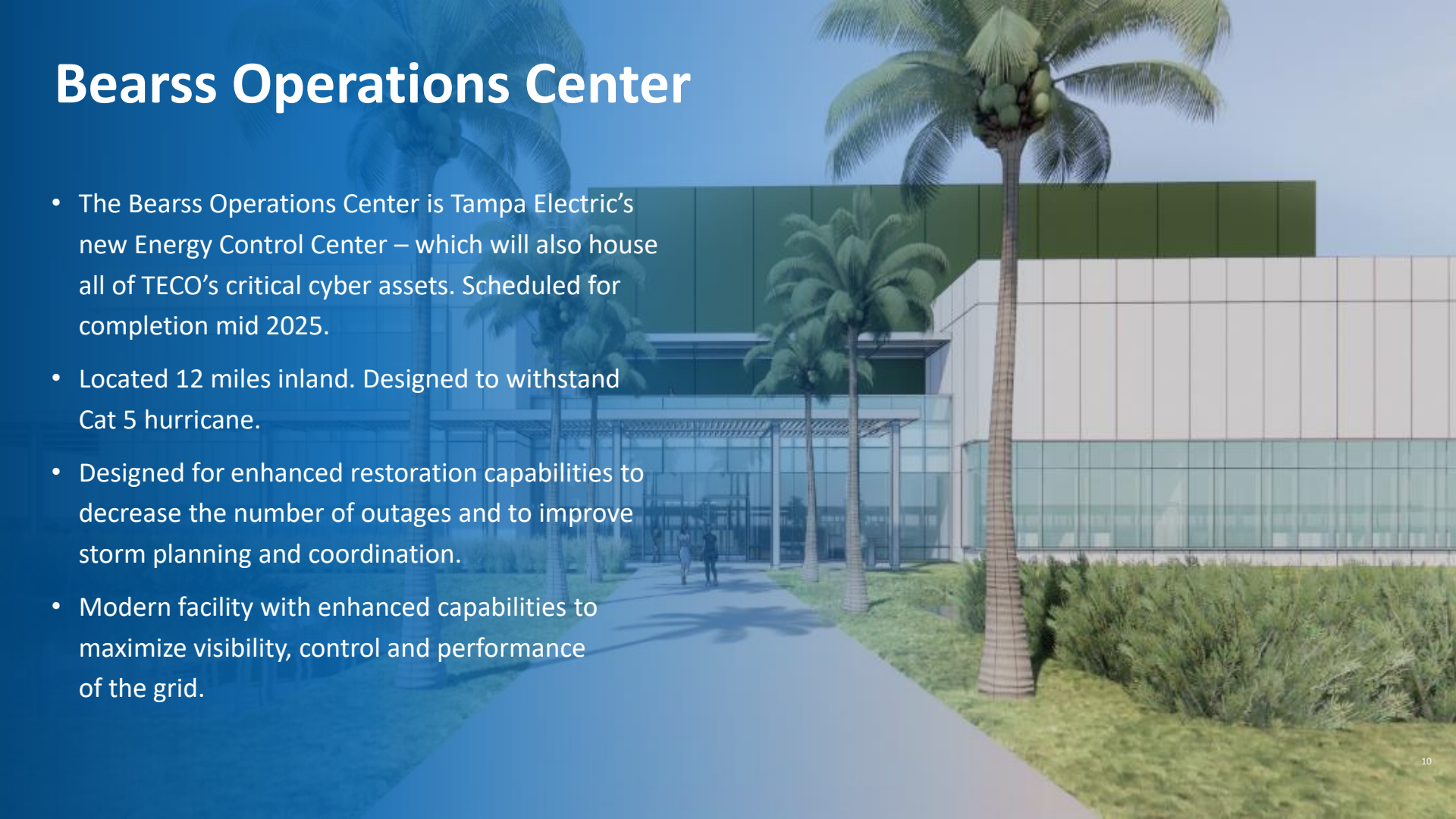
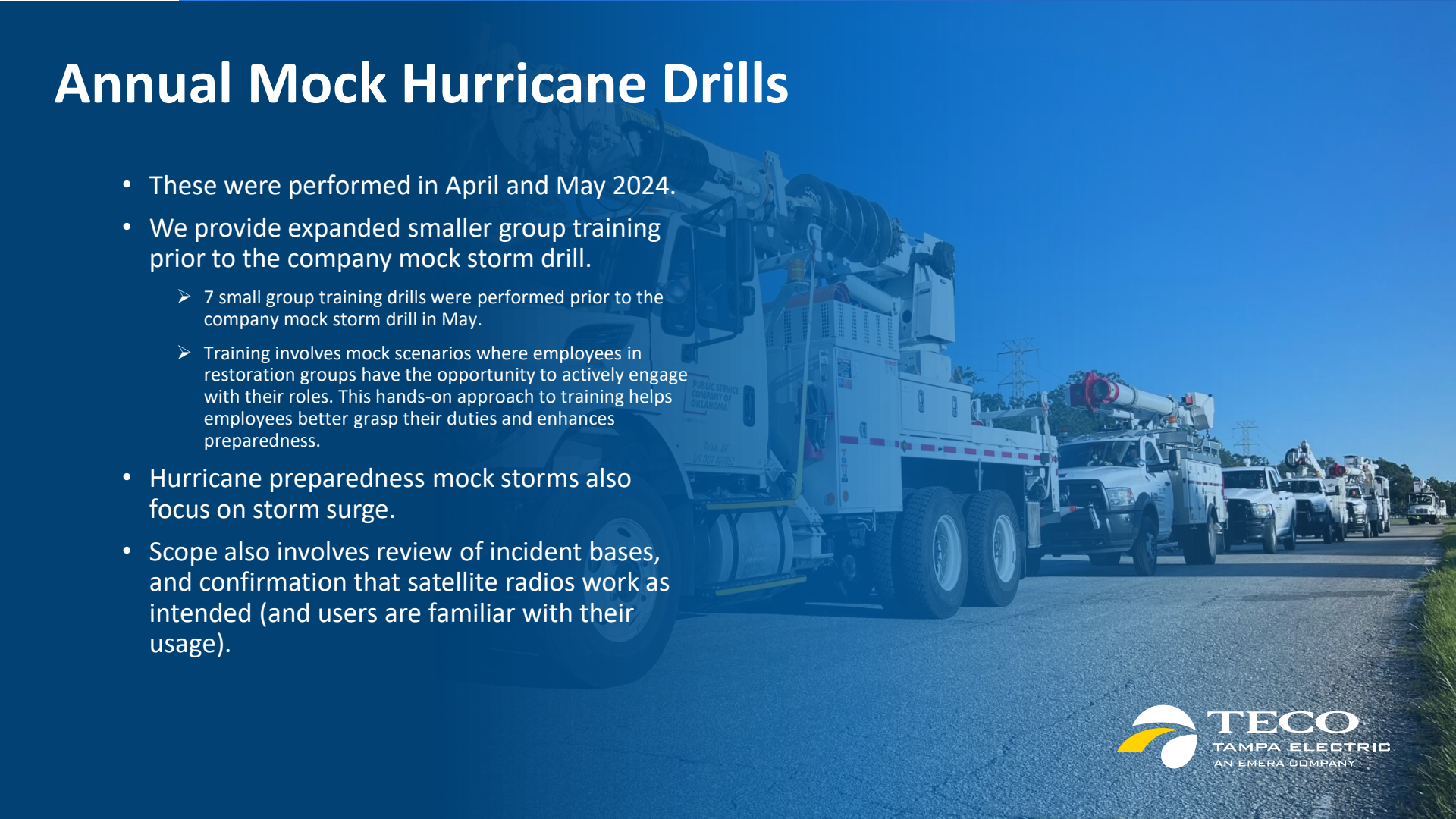
Bearss Operations Center

- The Bearss Operations Center is Tampa Electric's new Energy Control Center – which will also house all of TECO's critical cyber assets. Scheduled for completion mid 2025.
- Located 12 miles inland. Designed to withstand Cat 5 hurricane.
- Designed for enhanced restoration capabilities to decrease the number of outages and to improve storm planning and coordination.
- Modern facility with enhanced capabilities to maximize visibility, control and performance of the grid.



Annual Mock Hurricane Drills

- These were performed in April and May 2024.
- We provide expanded smaller group training prior to the company mock storm drill.
  - 7 small group training drills were performed prior to the company mock storm drill in May.
  - Training involves mock scenarios where employees in restoration groups have the opportunity to actively engage with their roles. This hands-on approach to training helps employees better grasp their duties and enhances preparedness.
- Hurricane preparedness mock storms also focus on storm surge.
- Scope also involves review of incident bases, and confirmation that satellite radios work as intended (and users are familiar with their usage).



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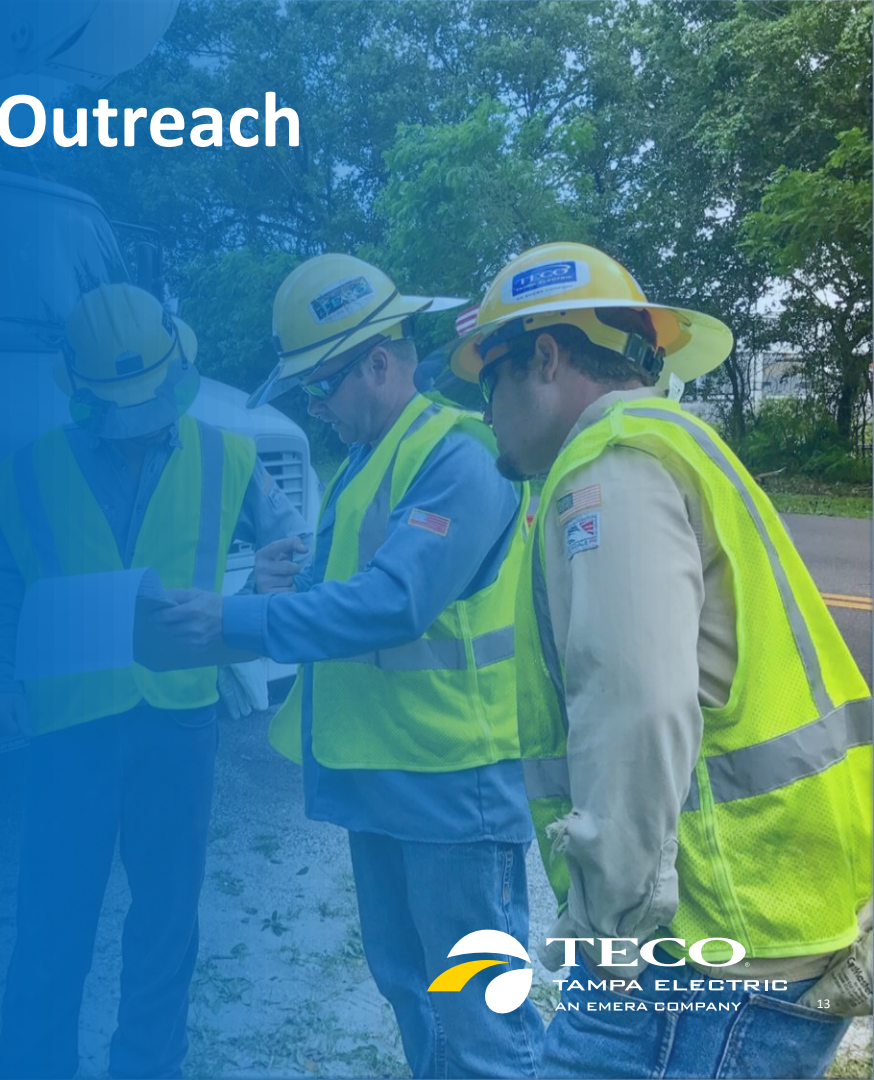
Mutual Aid Alliances

- Mutual aid agreements:
  - Members of the Southeastern Electric Exchange (SEE).
  - Members of the Edison Electric Institute (EEI).
  - SEE and EEI provide access to over 100 utilities.
  - These are robust, storm-tested mutual assistance groups.
  - We also have agreements in place with municipalities within Florida.
  - Also affiliated with third parties that provide any needed contact center support throughout a significant storm event.

Storm Readiness Community Outreach

- We are proud to have been recognized in 2024 as ‘Storm Ready’ by the National Weather Service.
- We review and update the list of critical facilities with County Emergency Management agencies annually.
- We review staffing plans annually for each County and Municipality EOC that we support. Every TECO employee has a storm assignment.
- We regularly participate in numerous community outreach events promoting hurricane preparedness.
- We have both internal and external communication plans for multiple levels of severity for all three stages of severe weather - including pre-storm, during-storm and post-storm. Safety campaigns are customized to fit the intensity and type of storm.



TECO TAMPA ELECTRIC AN EMERA COMPANY

Customer Communication Campaigns

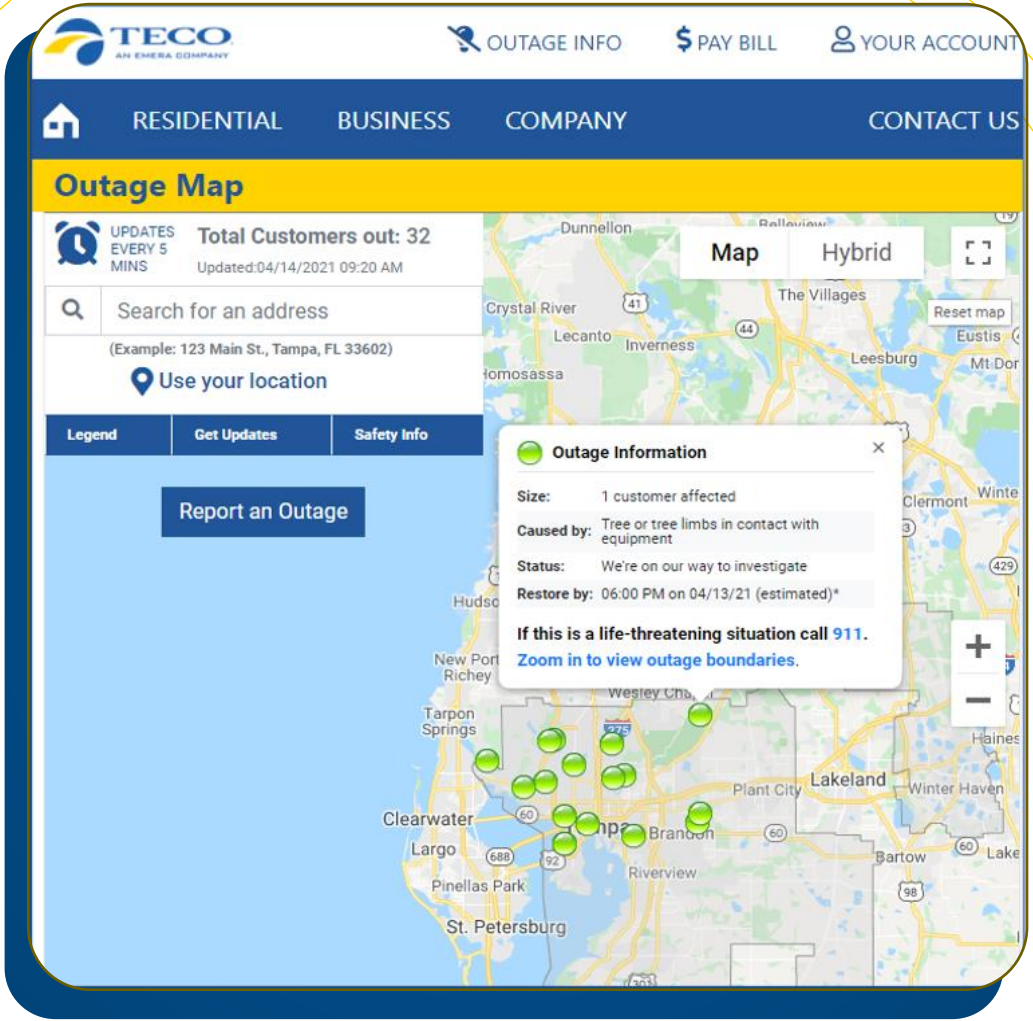
Communications are provided across multiple channels (phone calls, emails and text messages). In addition, customers receive information in preferred language (English or Spanish). Information is also available through social media, our online customer portal, and public websites.

- **Outage Reporting**
  - Automated IVR, 2-way text messaging, online customer portal/outage map, and live customer service agent.
- **Proactive Outage Communications**
  - Acknowledgement that we are aware of a new outage.
  - We provide known information - including initial time of restoration, # of customers impacted, cause, and status.
- **Restoration Notifications**
  - Provided when ETR changes by more than 2+ hours.
  - Confirmation when power has been restored.
- **General Communications Throughout Hurricanes**
  - Pre-hurricane prep messaging reminding customers to be ready and what our process is leading up to restoration.
  - Post-hurricane messaging advising we are assessing damage.

Customer Outreach

OUTREACH DURING RESTORATION

- We provide continuous updates to Tampa Electric's outage map throughout restoration to keep customers informed.
  - Messages include damage assessment, restoration progress percentage, ETRs, customer safety, and outage reporting messages.
- We utilize social media (Twitter, Facebook, Nextdoor), our website (homepage sliders, blog), e-newsletters, and media coverage to provide restoration progress, wire down safety messaging, generator safety alerts, and thank you messages.



In Summary

- We prepare year-round for severe weather.
- We are enhancing assets and leveraging technology to achieve a stronger, smarter grid – an intelligent grid that has improved visibility and enables faster restoration.
- We strive to continuously improve storm preparation and readiness.
- We aim to be good partners – all the time.
- Our employees recognize that customers count on us every minute of every day – and that this responsibility is amplified during storm season.

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Questions?

Attachment 5

FECA

Florida Electric Cooperatives Association, Inc.

Florida Public Service Commission
2024 Hurricane Preparedness Workshop

Mike Bjorklund

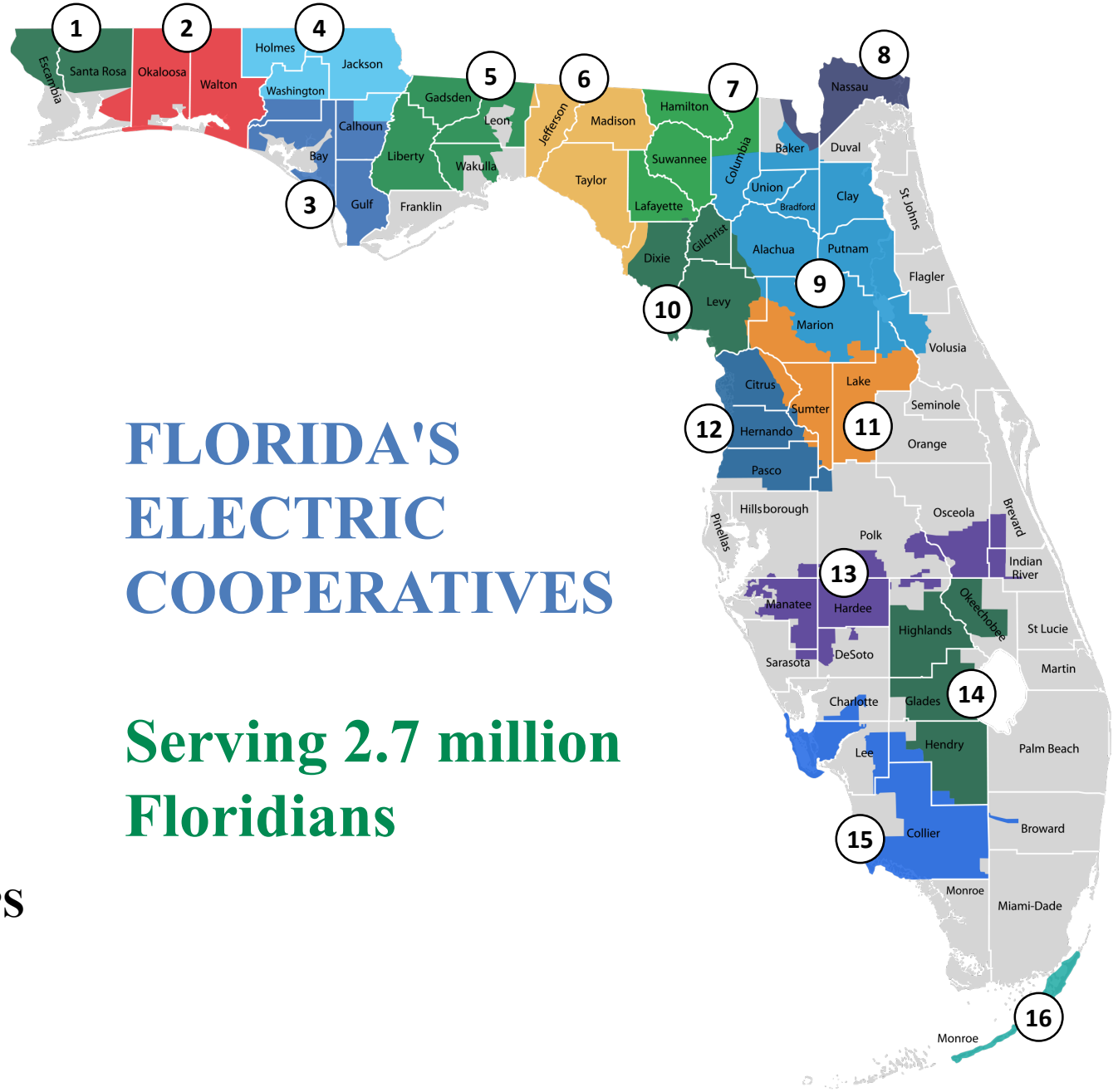
Executive V.P. & General Manager

DISTRIBUTION CO-OPS

1. Escambia River EC
2. CHELCO
3. Gulf Coast EC
4. West Florida EC
5. Talquin EC
6. Tri-County EC
7. Suwannee Valley EC
8. Okefenoke REMC
9. Clay EC
10. Central Florida EC
11. SECO Energy
12. Withlacoochee River EC
13. Peace River EC
14. Glades EC
15. LCEC
16. Florida Keys EC

GENERATION & TRANSMISSION CO-OPS

1. PowerSouth Energy Cooperative
2. Seminole Electric Cooperative



FLORIDA'S ELECTRIC COOPERATIVES

Serving 2.7 million Floridians

Efforts to Ensure Reliability

Hardening Infrastructure

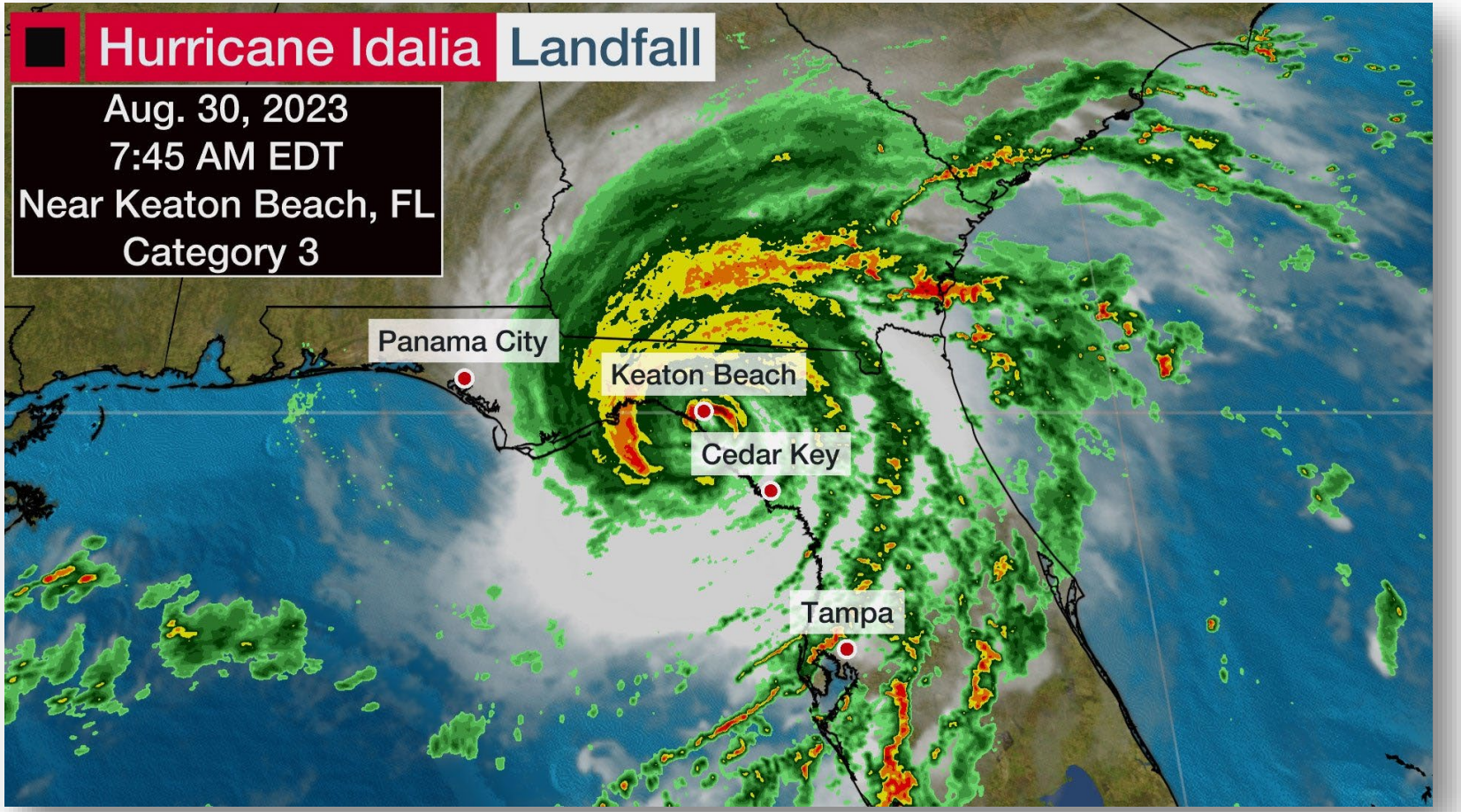
- Poles
- Vegetation Management
- Redundant Systems

Minimizing Friction

- Pre-storm Procurement
- Working Group To Implement Best Practices
- Relationships Ready for Storm Season
  - Consumer-members
  - Utilities
  - Emergency Personnel
  - Civic Leaders

FECA

Hurricane Idalia Lessons Learned



FECA

Base Camp Benefits

- Pre-storm Preparation Paid Off
- Less Windshield Time
- Sharing Base Camps When Efficient

FECA


FECA


Fuel Bays
Storm Yard
(Poles & Warehouse
Materials)
Meal Tents
Pole Yard
Mechanic Shop
Kitchen
Transformers
Shower & Bathroom Trailers
Warehouse & Dispatch
More Sleep Trailers
(30-36 beds each)
More Bathrooms
Laundry Services
Sleep Trailers
(30-36 beds each)
SVEC
Suwannee Valley Electric Cooperative

Managing 20-times Your Blue-Sky Workforce

- Safety Without Lost Time
- Every Employee a Bird Dog
- Mutual Aid in Many Forms

FECA

Tri-County Restoration Personnel

Tri-County Employees	66
Florida Co-op Mutual Aid	109
Out of State Co-op Mutual Aid	235
Municipal Mutual Aid	95
Contractors	667
Duke Energy Contractors	494
Total	**1,666**

FECA

FECA

Dealing with Density

Suwannee Valley Electric Co-op

- 7.1 consumers per mile of line
- 1,012 poles replaced
- 327 transformers replaced
- 3,991 miles of line

Tri-County Electric Co-op

- 6.2 consumers per mile of line
- 1,200 poles replaced
- 520 transformers replaced
- 3,139 miles of line

FECA

FECA

Florida Co-ops 2024 Hurricane Prep

Fundamentals

- Meeting with Local Officials
- Member Education
- Procuring Storm Resources
- Tree Trimming

2024 Points of Emphasis

- Storm Response Working Group
- Mutual Aid in Many Forms

FECA

Florida Co-ops' 2024 Hurricane Prep

FECA 2024 Hurricane Meeting

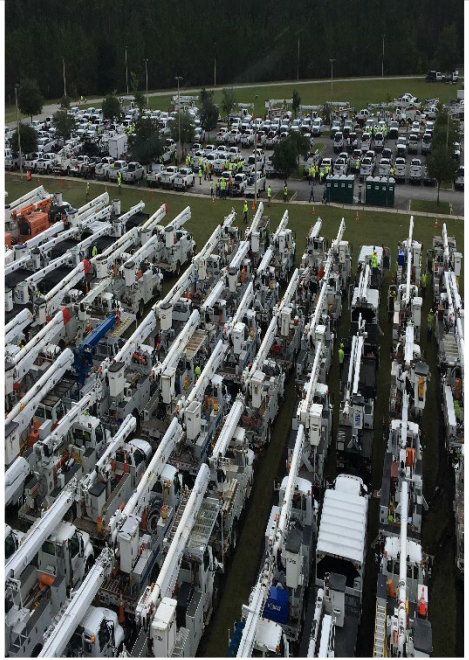
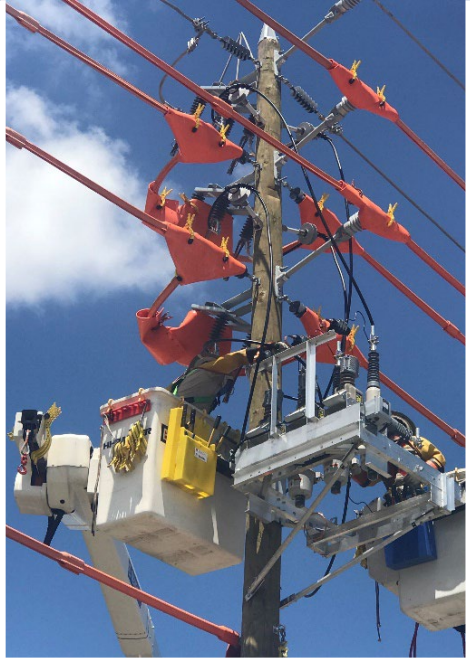
April 9-10, 2024 in Ocala

- FDEM
- FHP
- Mike Boylan of Mike's Weather Page
- Crew Software Developers
- Base Camp Companies
- Idalia Impacted Co-ops

FECA


FECA

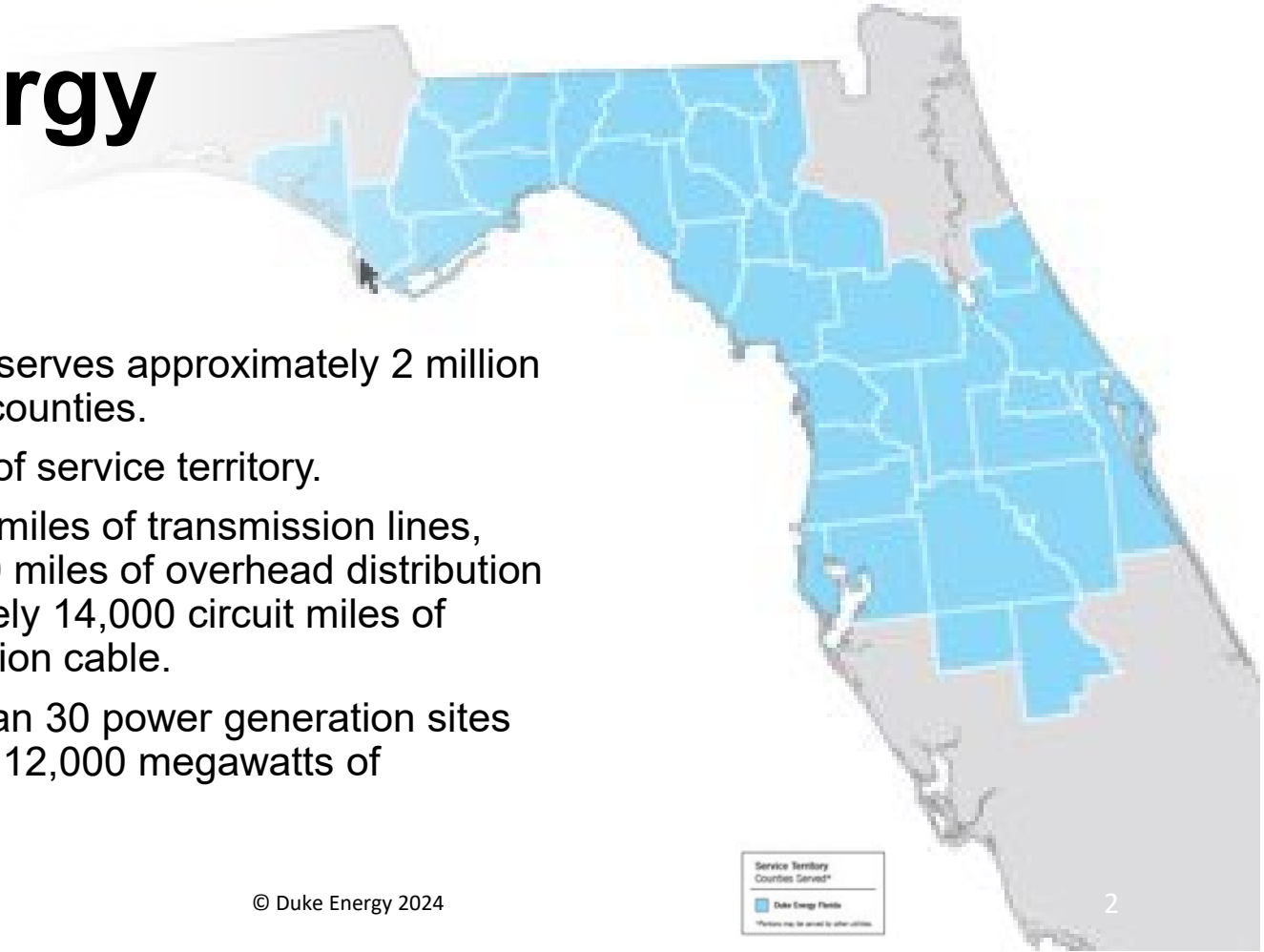
Attachment 6


Duke Energy Florida

MELISSA SEIXAS

Duke Energy Florida

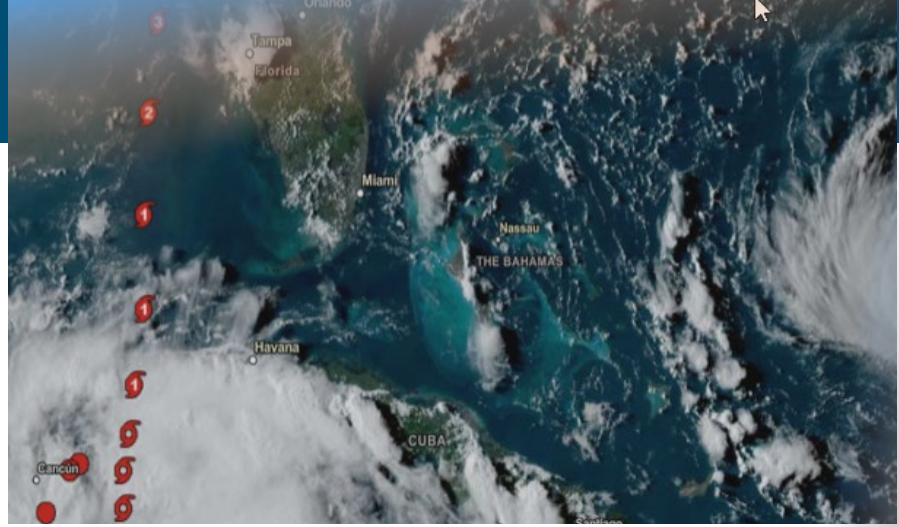


- Duke Energy Florida serves approximately 2 million customers within 35 counties.
- 13,000 square miles of service territory.
- Approximately 5,200 miles of transmission lines, approximately 18,000 miles of overhead distribution lines and approximately 14,000 circuit miles of underground distribution cable.
- We maintain more than 30 power generation sites capable of producing 12,000 megawatts of electricity.

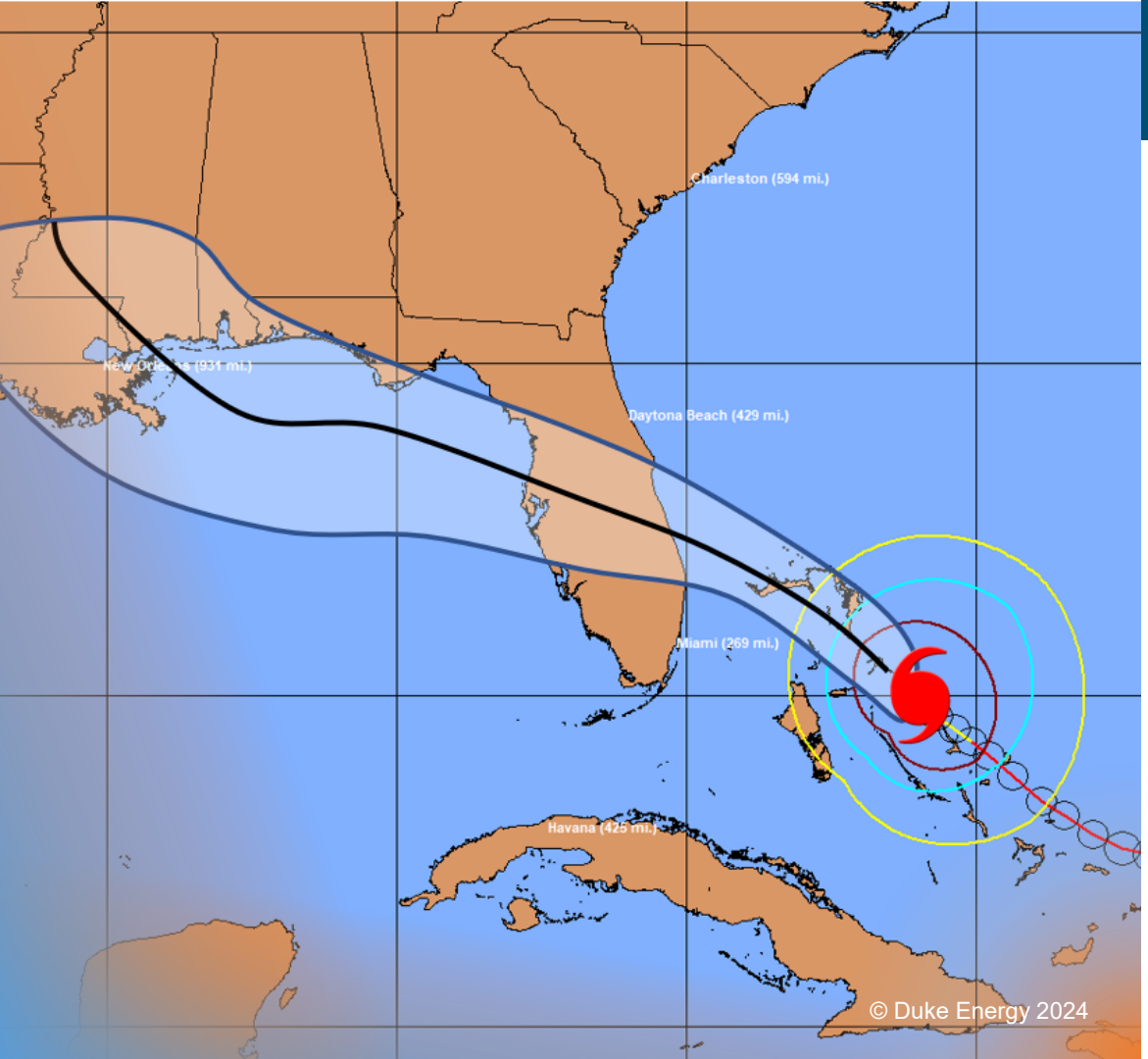
Storm Preparedness and Restoration

Preparedness Activities

- Critical Customer List Review
- Storm Room Critical Feeder List
- Review / Update Business Continuity Plans
- Retiree Recruitment Process Review
- Customer Delivery / Transmission Joint Effort Discussions
- Staging Site Acquisition/Review Process
- Mid-Level Training
- Review / Update Storm Response Org Charts



Storm Drill 2024



- Review Incident Command Structure
- Storm charging guidance review
- Provide training on storm tools / applications
- Meteorology 2024 forecast
- Activate basecamps / staging sites and assign resources
- Develop ETR & Communication Strategies.
- Mobilization & Demobilization of Resources

Storm Hardening

1

Sectionalizing Guidelines

- 400 customers
- 3 miles of line
- 2 megawatts of load

- ~74% customers on automation

- ~49% on self-healing grid

- By year-end 2026 100% on automation with 80% on a self-healing grid

2

Benefits

- During Hurricane Idalia, grid automation prevented approx. more than 18,000 customer outages & saved over 5M CMI.

- During Hurricane Ian, grid automation restored approx. more than 166k customer outages & saved ~196M customer minutes of interruption.

- During Hurricane Nicole. grid automation restored approx. more than 55k customer outages & saved ~13M customer minutes of interruption.

Mutual Aid

Duke Energy Florida, LLC (“DEF”) remains active in the Southeastern Electric Exchange Mutual Assistance Group, EEI and the Florida Coordinating Group. In addition, annual contracts with numerous line, vegetation management, logistics and damage assessment vendors.

Neighboring Utilities

Providing assistance to neighboring co-ops and municipalities is a priority

Examples:

- LCEC following Hurricane Ian
- Sharing base camps and resources with Tri-County Electric Cooperative and Suwannee Valley Electric Cooperative during Hurricane Idalia
- Benching marking after the storm has passed to improve future response

Storm Material

As part of DEF's storm process, we keep Storm Material Boxes on hand, stocked and ready to deploy, if needed, to staging sites upon activation. For larger material needs, prior to a major storm, Supply Chain will assess inventory and provide a pre-storm delivery to strategic locations based on DEF's weather models.

Blue-Sky

- Inventory is utilized as working stock within the Op Centers.
- Ensures the material is current with standards.
- Ensures that inventory is within the manufacturers recommended shelf life.

Red-Sky

- Anticipated that our native line resources will come off their tools and lead off-system contract resources.
- Lockers are deployed to the basecamps.
- Storm kits containing the same material are supplied to each Op Centers to be utilized by native crews when performing restoration.

Customer/Community Outreach and Communication

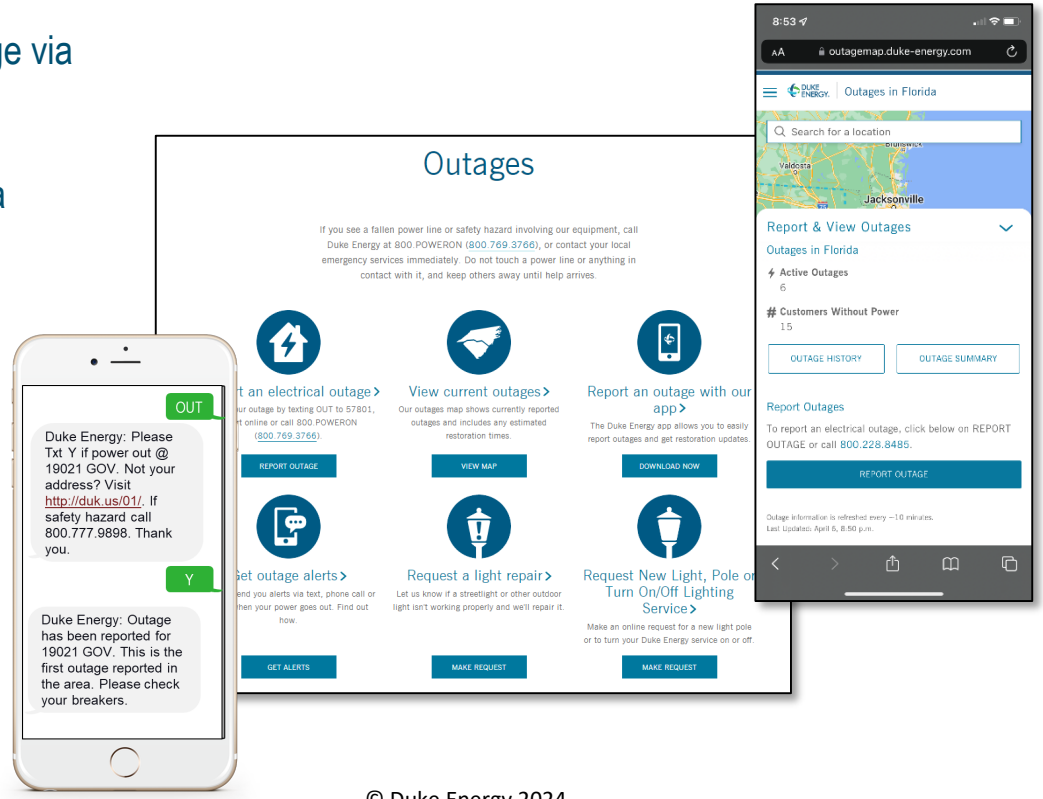
Storm Preparedness and EOC Engagement

- Each County is assigned a Community Relations Manager and they work directly with the county EOC. The CRMs and county leaders work together to ensure storm readiness.
- Conduct face to face meetings with each of our county EOCs prior to storm season.
- Conduct “Live Line” & Safety demonstrations with requesting counties.
- Aid counties in facilitating EOC drills that focus on annual readiness.

Customer Outage Reporting Options

Duke Energy has several internal tools and methods for determining outages. Each customer has the following options to let us know about an outage:

- Call in and use the IVR to report the outage via 800.288.8485
- Report on duke-energy.com/outages or via the Duke Energy mobile app
- By accessing the outage map and reporting on our website
- Text ‘OUT’ to short code 57801 on your mobile device
- After hours Facebook chatbot available to customers to report an outage



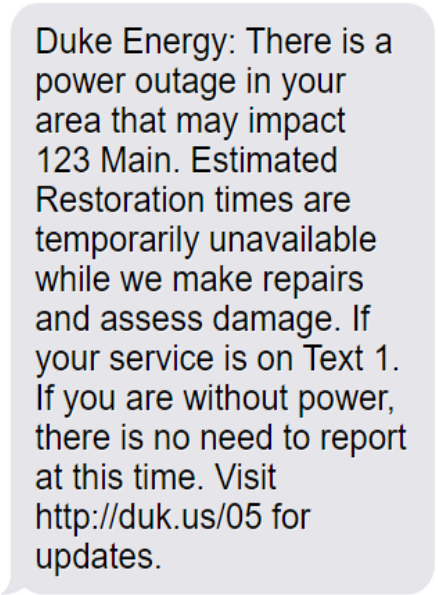
Direct Customer Communications

There are three main 'campaigns' within Outage Alerts that are used to keep customers informed.

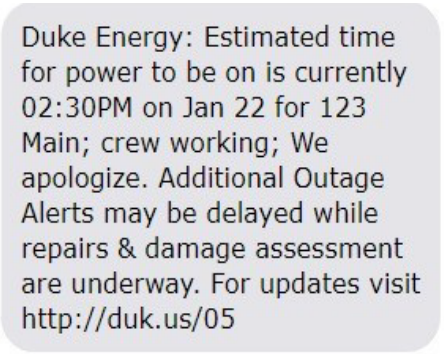
1. Initial Out Campaign – This is the campaign that notifies customers the we are aware of their outage. If available, the system generated ITR can also be included here. Except for technical issues, this campaign will typically stay on.

2. ETR Campaigns – This campaign is what provides customers the majority of updates including ETR or updates to ETR, crew status, and cause. During large storm events, this campaign can be disabled

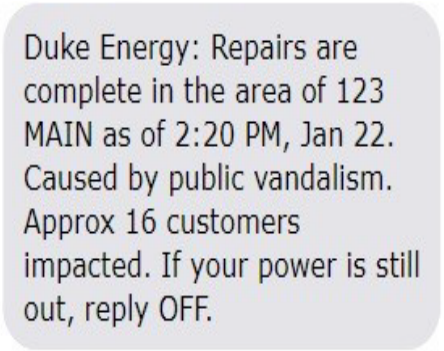
3. Restoration Campaigns – This campaign notifies the customer that we have restored power to their area. This can also be disabled during large storms.



Initial Out Campaign (OMS ITRs Off)



ETR Campaign (OMS ITRs Off)



Restoration Campaign

Vegetation Management

Vegetation Management

Customer Delivery

Trim Cycles

On target to meet anniversary cycle commitments

- 3-year / feeder backbone
  - Currently in year one of the three-year feeder cycle.
- 5-year / laterals
  - Currently in year four of the five-year lateral cycle.
- Annual hurricane hardening completed by June 1st each year.

2023 Results

- Completed 4,474 miles of maintenance trimming.
- Performed vegetation work on 8,294 customer requests.
- Performed vegetation work to support approximately 7,468 design work orders.
- Removed 13,481 trees.

Vegetation Management

Transmission

Planned Transmission Vegetation Management work for DEF is based on identified threats and conditions. This work is prioritized and scheduled using data identified through patrols, inspections and assessments, while considering factors like the date of previous work activities and outage history. The condition-based approach allows for approximately 6 years of typical vegetation re-growth and support minimum safe worker distances.

VM – Transmission	2023 (Actuals)	2024 (Projected)
NERC (>200 kV)	38	198
Non-NERC (<200 kV)	534	484
Total Planned Work Mileage	572	682

Third Party Attachments

Joint-Use Equipment

Joint Use Equipment in DEF:

- Approximately 1,000,000 poles throughout our distribution system.
- 800,000 have a third-party attachments (80%).
- 16,000 are not owned by Duke Energy (1.6%).

Joint equipment usage coordination:

- Blue sky – Work with joint use affiliate to schedule equipment replacement.
    - Duke Energy maintains after hour phone numbers for emergency requests (vehicle accidents, etc.).
    - The third-party affiliate is contacted to inform them of work completion.
    - Red sky – Attempt to contact joint use affiliate to inform them of restoration efforts.
        - Damaged equipment is removed / replaced during restoration.
        - Does not impact our restoration times.

Pole inspections

Pole Inspections

Distribution

- Poles are inspected on an eight-year cycle
  - Currently in year three of our eight-year cycle.
- 101,610 poles were inspected in 2023
  - Less than one percent were priority ground line rejects.

Transmission

- Wood Poles are inspected on a four-year cycle
  - Sound & Bore inspections on wood poles are on an eight-year cycle
  - 3,001 wood poles were inspected in 2023
  - 4.7% were priority ground line rejects.
- Steel/Concrete Poles & Lattice Towers are inspected on a 6-year cycle
  - 7,097 Steel/Concrete Poles & Lattice Towers were inspected in 2023

Lessons Learned

After Action Review

- Pre-Staging crews outside the storm path taking into consideration storm surge
- Bussing transportation from hotels to staging sites
- Hotels vs. sleeper trailers
- Crew rosters