



Hurricane Preparedness Workshop

To the Florida Public Service Commission

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Vegetation Management

- Distribution
 - Four-year cycle for feeders and laterals
 - Completed year four of the cycle in 2020
 - 1,638 miles trimmed
 - Additional 397 miles trimmed – Storm Protection Plan (SPP)
 - 3,668 hotspots trimmed
- Transmission
 - Two-year cycle on Bulk (230kV, 138kV)
 - Three-year cycle on non-Bulk (69kV)
 - 518 miles trimmed
 - 3,537 acres of right-of-way mowed



Pole Inspections

- Distribution
 - Eight-year cycle
 - 24,962 wood poles inspected
 - 993 poles failed
 - 1,435 poles replaced
 - 594 reinforced
- Transmission
 - Eight-year cycle
 - 659 poles inspected
 - 115 poles failed
 - 296 poles replaced
 - 115 Non-SPP
 - 181 SPP
 - Other pole/circuit inspection methods:
aerial infrared and ground patrols.



SPP, Hardening & Reliability Projects

- 296 transmission structures hardened.
- 110 distribution live-front critical switchgears replaced with dead-front, submersible gears.
- 58 three-phase reclosers installed; 127 single-phase reclosers installed.
- 1,249 new fuse installations/coordination
- 404 lightning arrester installations/repairs

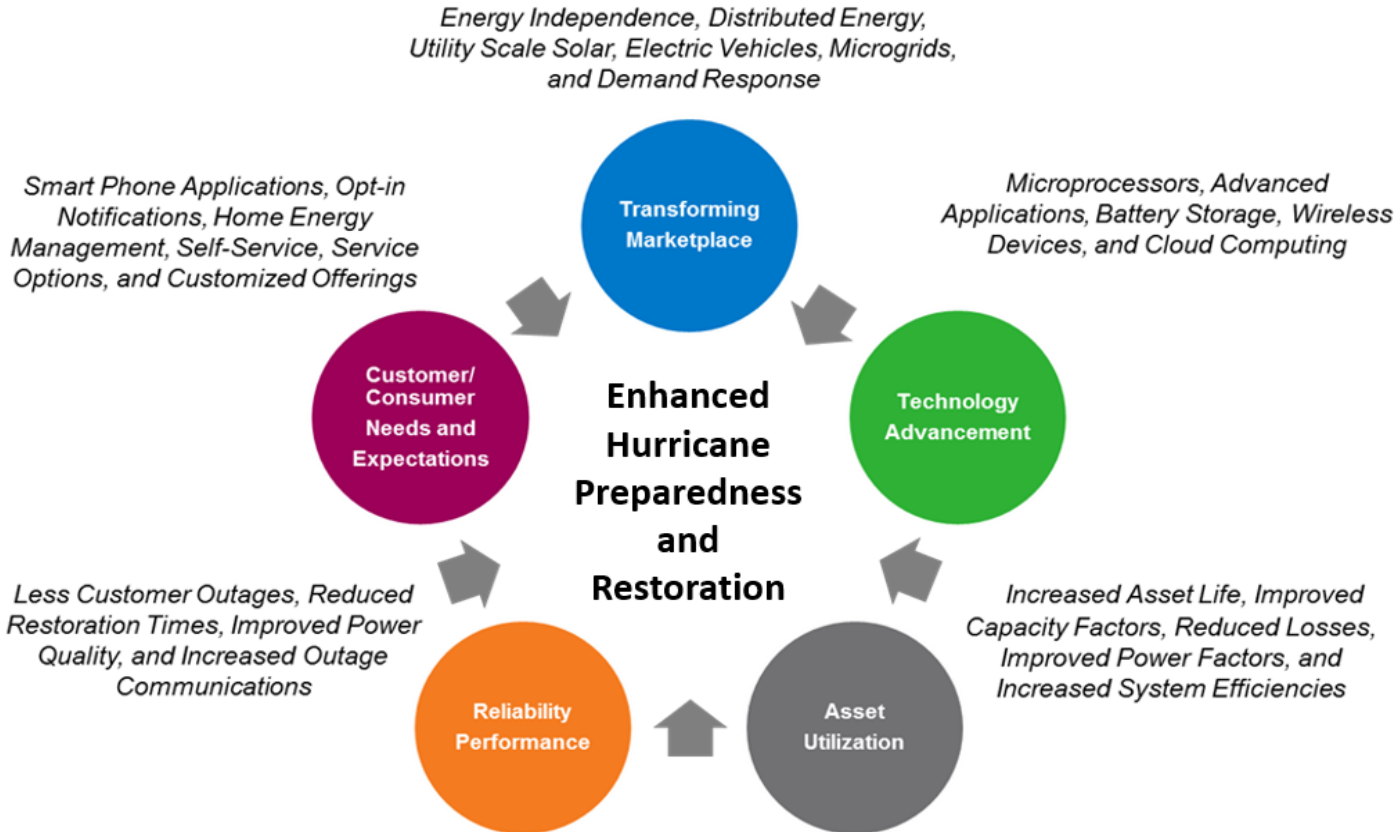


Storm Plan & Mock Drill

- Storm Plan changes:
 - ARCOS is fully functional for foreign crew tracking.
 - We have plans in place should we experience a reduction in support from foreign crews due to the COVID but based on 2020 experience with other utilities, we do not anticipate that happening. Full support of Southeastern Electric Exchange Utilities.
 - Utilizing industry standard guidelines from the Electricity Subsector Coordinating Council on mutual assistance and participating in working groups.
 - Implementation of the new Advanced Distribution Management System (ADMS).
- Annual mock hurricane drills:
 - Incident bases reviewed and updated as necessary.
 - Drill Scheduled for June 24 to enable testing of the new ADMS.



Advanced Distribution Management System (ADMS)



Mutual Aid & Readiness Outreach

- Mutual aid agreements:
 - One with Southeastern Electric Exchange (SEE)
 - One with Edison Electric Institute (EEI)
 - Agreements with municipalities within Florida
 - SEE & EEI gives access to over 100 utilities
 - Robust, storm-tested mutual assistance group
- Storm readiness outreach:
 - Outreach sessions held to discuss preparedness and review of critical facilities with County Emergency Management Agencies. List of critical facilities updated for 2021.
 - Staffing plans annually reviewed for each County and Municipality Emergency Operations Center (EOC) served.
 - Templates created for external communications (pre-storm, post-storm, and generator safety).
 - Personnel prepared to report to assigned EOC, as needed.



Customer Communication Campaigns

- Proactive Outage Communications
 - Acknowledgement that we are aware of a new outage
 - Provide and known information including initial time of restoration, # of customers impacted, cause, and status
- Estimated Time Of Restoration (ETR)
 - Notifying when ETR has changed more than 2+ hours
 - Updated cause or status
- Restoration Notifications
 - Notifying when an outage has been restored
 - Principates further outage clarification if there are nested outages
- General Communications During 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



Continued Customer Outreach

- Customer outreach during restoration:
 - Continuous updates to Tampa Electric's outage map to improve communication to customers
 - Outage map continually updated throughout restoration about damage assessment, restoration progress percentage, ETRs, customer safety and outage reporting messages.
 - Twitter, Facebook, YouTube, Blog, email, media coverage with outage reporting solicitations, wire down & generator safety, restoration progress, restoration videos, and thank you messages.

The screenshot shows the Tampa Electric (TECO) website's 'Outage Map' interface. At the top, there are navigation links for 'OUTAGE INFO', 'PAY BILL', and 'YOUR ACCOUNT'. Below that, there are tabs for 'RESIDENTIAL', 'BUSINESS', 'COMPANY', and 'CONTACT US'. The main heading is 'Outage Map'. On the left side, there is a search bar with the text 'Search for an address' and an example '(Example: 123 Main St., Tampa, FL 33602)'. Below the search bar is a 'Use your location' button. A 'Report an Outage' button is prominently displayed in a blue box. The map itself shows the Tampa Bay area with several green circles indicating affected customers. A pop-up window titled 'Outage Information' is open, showing details for a specific location: 'Size: 1 customer affected', 'Caused by: Tree or tree limbs in contact with equipment', 'Status: We're on our way to investigate', and 'Restore by: 06:00 PM on 04/13/21 (estimated)*'. The pop-up also includes a warning: 'If this is a life-threatening situation call 911. Zoom in to view outage boundaries.' The website footer includes 'Map data ©2021 Google, INEGI'.

Lessons Learned

- More resources for wires down & streamline process.
- Train internal and external management teams to operate additional incident bases.
- Develop enhanced granularity on ETRs to meet customer expectations.
- Implemented Lessons Learned
 - ADMS to gather more frequent damage assessment and restoration data from field and incorporate into Outage Management and Work/Resource Management Systems more efficiently.
 - ARCOS technology to enhance tracking of crews and progress.
 - Streamline outage communication technologies.
 - Improve storm documentation and invoice review process.

