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 one of the cycle in 2021
  - 1,628 miles trimmed
  - Additional VM on 721 miles trimmed – Storm Protection Plan (SPP)
  - 451 hazard trees removed
- Transmission
  - Two-year cycle on Bulk (230kV, 138kV)
  - Three-year cycle on non-Bulk (69kV, 34kV)
  - 523 miles trimmed
  - 8,404 acres of right-of-way mowed

Pole Inspections

- Distribution
  - Eight-year cycle
  - 19,861 wood poles inspected
  - 798 poles failed
  - 417 poles replaced

- Transmission
  - Eight-year cycle
  - 284 poles inspected
  - 32 poles failed
  - 722 poles replaced
    - 85 Non-SPP
    - 637 SPP
  - Other pole/circuit inspection methods: aerial infrared and ground patrols.

SPP, Hardening & Reliability Projects

- 637 transmission structures hardened.
  - 84.2% of the Transmission System is non-wood
- 1,222 distribution pole replacement/ upgrades.
- 143 three-phase reclosers and 334 single-phase reclosers installed.
- 737 new fuse installations/coordination.
- Substation Extreme Weather Hardening Study completed
  - Identified nine transmission and distribution substation projects

Always On Vision – Customer Experience

- Tampa Electric aspires to build and operate a safe, clean, modern grid that is always on.
- Our system storm hardening and grid modernization programs are designed to minimize outages, outage durations and affected customer counts.
- Developing a private Long-Term Evolution (LTE) communication network designed to enable our Fault Location Isolation Service Restoration (FLISR) control and distribution automation system.
- Early design phase of a hardened energy control center:
  - Improve storm control resiliency.
  - Modernize the facility and operating technologies to industry best practice standards.
  - Enhance our ability to provide uninterrupted service to our customers.

Create an "Always On" customer experience

Leverage asset management to eliminate outages and improve efficiencies

Build additional grid and telecommunications capacity

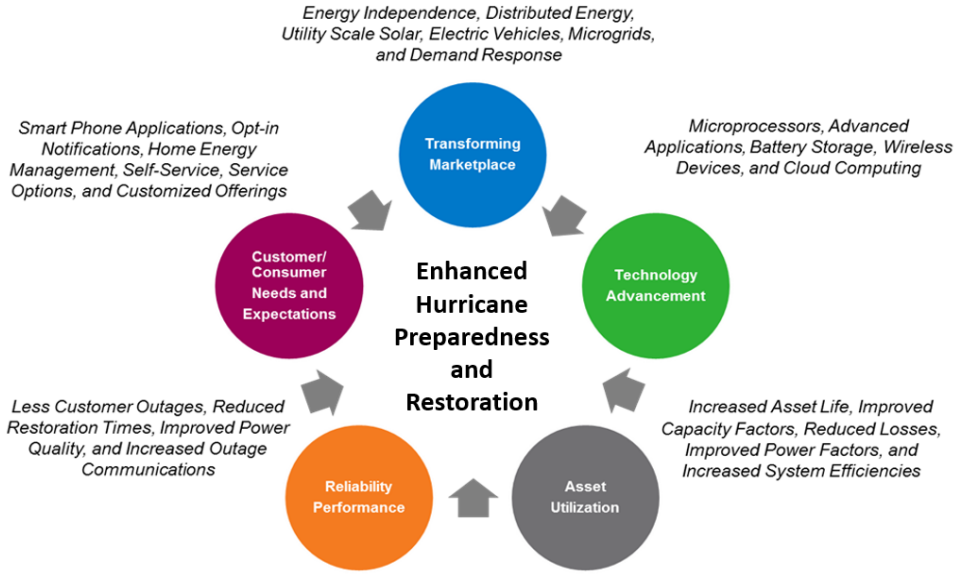
Fully automate the grid

Storm Plan & Mock Drill

- Storm Plan changes:
  - Automated Resource Callout System (ARCOS) is fully functional for foreign crew tracking.
  - Continue enhancement efforts of the new Advanced Distribution Management System (ADMS).
  - Signed service level agreements with multiple turnkey logistics providers (base camps).
- Annual mock hurricane drills:
  - First week of May 2022
  - Hurricane preparedness seminars conducted to promote use of personalized emergency response playbooks.
  - Incident bases reviewed and updated.
  - Exercise on use of Damage Assessment Tool within ADMS currently being planned.
  - Drills conducted to test amateur radio capabilities

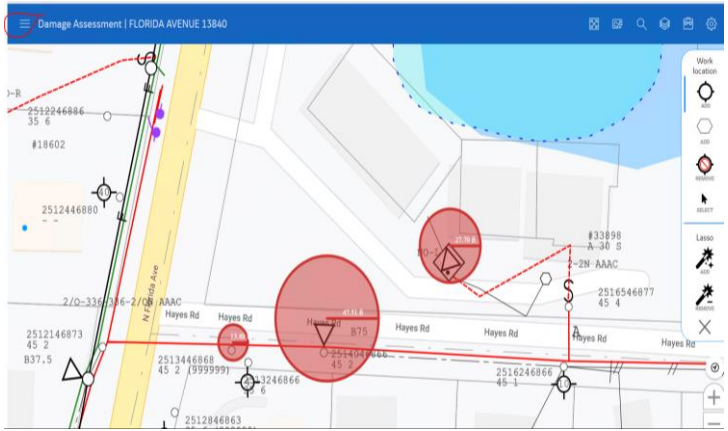
ADMS Provides New and Improved Storm Capabilities

- Live cutover in April 2021
- Replaced our legacy Outage Management System (OMS).
- Effectively provides improved:
  - Switching Orders
  - Energized Work Permits
  - Restoration Time Calculations
  - Customer Notification Process
- Ability to perform de-centralized dispatching from Incident Bases.
- Links in power on / power off notifications- saving our customers the need for our customers to call.
- Improves our reporting capabilities for Emergency Operations Centers (EOC) and FPSC purposes.



Damage Assessment Module Within ADMS

- Available for this storm season.
- Device-driven tool (for internal and foreign assessors) that communicates back to the ADMS Core.
- Replaces the legacy manual paper-driven process.
- ADMS can issue and receive damage assessment orders from field operations and dedicated damage assessors.
- Assessment tool uses current copies of the electrical system GIS information.
- Reporting examples:
  - Number of poles, transformers switchgear and other major devices
  - Summary of tree down locations
  - Environmental concerns (oil spills)
- Provides detailed storm damage summaries for operator and management decision making during storm restoration events.



Mutual Aid & Readiness Outreach

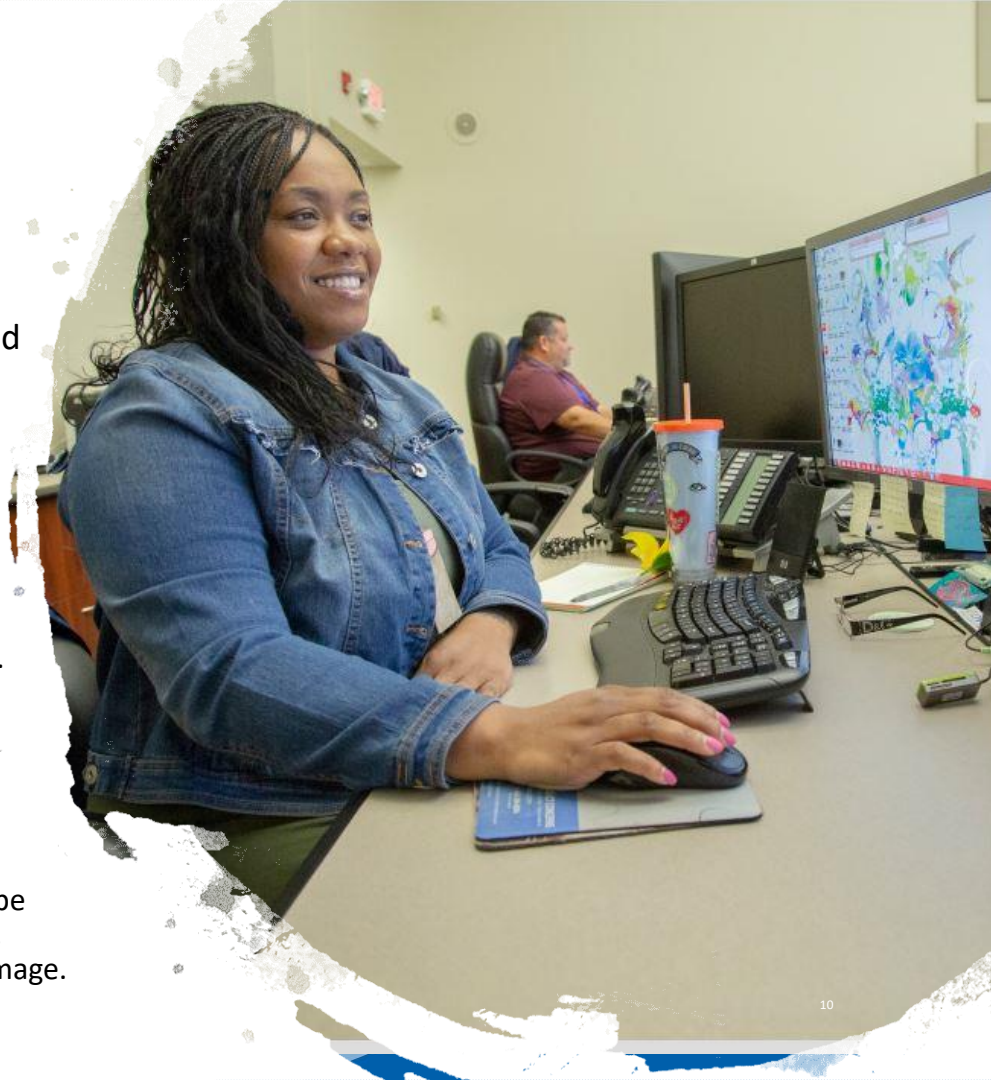
- Mutual aid agreements:
  - One with Southeastern Electric Exchange (SEE)
  - One with Edison Electric Institute (EEI)
  - SEE & EEI give access to over 100 utilities
  - Agreements with municipalities within Florida
  - Robust, storm-tested mutual assistance group

- Storm readiness outreach:
  - Discuss preparedness and review of critical facilities with County Emergency Management Agencies. List of critical facilities updated for 2022.
  - Participated in numerous community outreach events promoting hurricane preparedness.
  - Staffing plans annually reviewed for each County and Municipality EOCs served; personnel prepared to report to assigned EOC, as requested.
  - Templates created for external communications (pre-storm, post-storm, and generator safety).

Customer Communication Campaigns

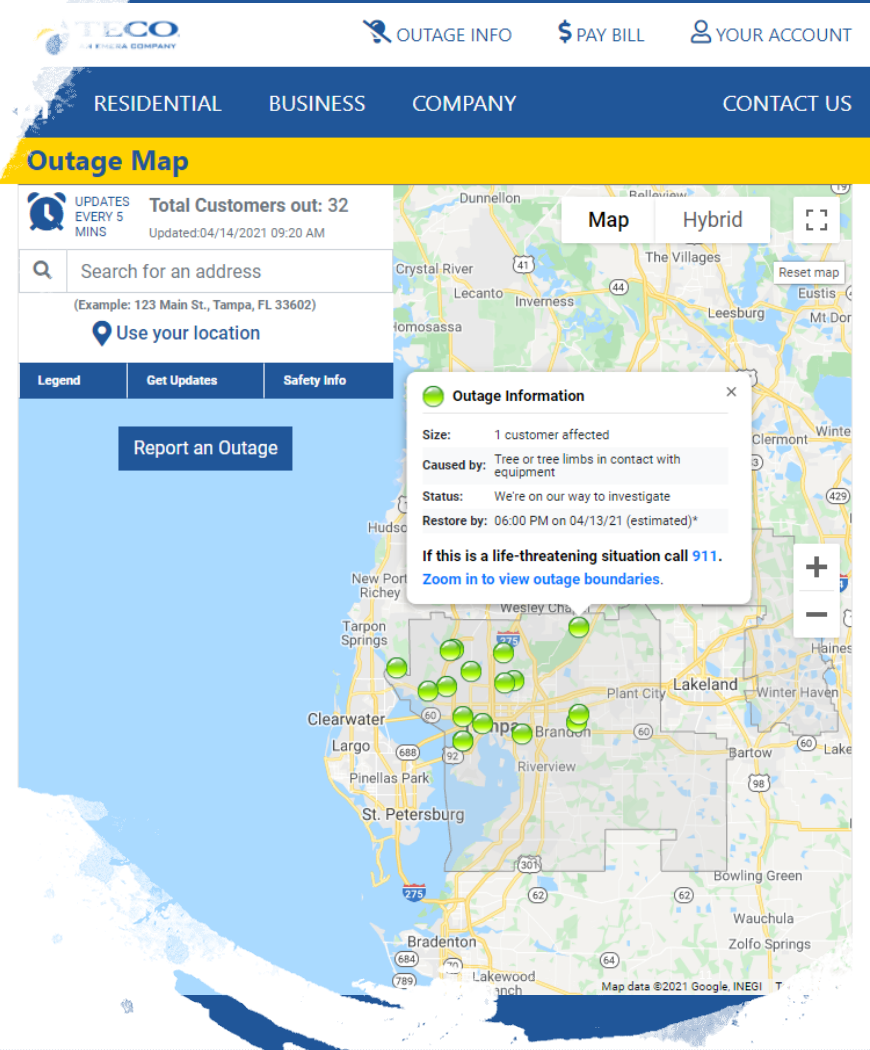
Communications are available across multiple channels including phone calls, emails, and text messages, and languages (English or Spanish) per customer preference. Also, through social media, our online customer portal, and public websites.

- **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.
  - Provide known information including initial time of restoration, # of customers impacted, cause, and status.
- **Restoration Notifications**
  - When ETR changes by more than 2+ hours.
  - Updated cause or status (if known).
  - When an outage has been restored.
  - Ability to re-report outages, if necessary.
- **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.



Lessons Learned

- Increase resources for wire down support and to streamline process.
- Train internal and external management teams to operate incident bases and base camps.
- Implemented Lessons Learned
  - Plan for a mobile safety orientation for greater efficiency.
  - New logistics contracts with third party base camp providers (provides flexibility based on storm conditions)

Questions?

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