Hurricane Preparedness Workshop for 2019

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Manager Technical Services
April 4, 2019
Emergency Preparedness Review

- Preparation
- Communication
- Restoration
Distribution Vegetation Management

- **Mainline Annual Trim Schedule (MATS)**
  - Feeder maintenance – on 1/3 of the mainlines (3 year cycle)
  - 2018: 241 Miles Planned/280 Actual

- **Mainline Inspection and Correction Schedule (MICS)**
  - Inspect and correct vegetation hazards on the other 2/3 of the mainlines annually
  - 2018: 482 Miles Planned/517 Actual

- **Scheduled Annual Lateral Trimming (SALT)**
  - Lateral maintenance of 1/4 of the lateral miles (4 year cycle)
  - 2018: 1,287 Miles Planned/1617 Actual
Preparation

Additional Distribution Vegetation Management

- Right-of-Way Perfection Program
  - 15 Feet Clearing Right
  - 89 Miles Acquired and Trimmed
Preparation

**Transmission Vegetation Management**

- **230kV R/W Vegetation and Correction (NERC)**
  - Ground inspection patrols and correction of any vegetation hazards identified will be completed by June 1\textsuperscript{st}
  - 2018 – 100% Inspections Complete – 595 miles
    - Corrections Complete

- **46kV & 115kV R/W Vegetation and Correction (Non-NERC)**
  - Ground inspection patrols and correction of any vegetation hazards identified will be completed by year end
  - 2018 – 100% Inspections Complete
    - 115kV = 1016 miles
    - 46kV = 58 miles
    - Correction @ 98% Complete
    - Target June 1\textsuperscript{st} Completion
Distribution Inspection/Maintenance/Repairs

• **Pole Inspections**
  – 8 year cycle
    ■ ~26,000 pole inspections planned/year
    ■ 28,070 inspected in 2018
    ■ 2.71% reject rate
    ■ 685 poles replaced

• **Feeder Patrols**
  – Annual inspection of distribution feeders
  – Repairs scheduled for completion by June 1st

• **Infrared Inspections**
  – Annual inspection of critical equipment
  – Items are identified and prioritized for repairs by June 1st
Transmission Inspection/Maintenance/Repair

• Pole Inspections
  – Wood and Concrete Poles/Structures
    ■ Ground line – 12 year cycle
    ■ Comprehensive walking/climbing – 12 year cycle
      – Poles are visited every 6 years as programs run simultaneously

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<td>2018 Rejects</td>
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Transmission Inspection/Maintenance/Repair

- **Pole Inspections**
  - Metal Structures
    - Ground line – 18 year cycle
    - Ground line inspection cycle 18 year
    - Comprehensive walking/climbing or helicopter – 18 year cycle
      - Poles are visited every 6 years as programs run simultaneously
  - Aerial Patrols
    - Four patrols conducted annually

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<th>2018 Planned</th>
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<tbody>
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<td>2018 Inspected</td>
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<td>2018 Rejects</td>
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*Hurricane Michael
**Distribution Storm Hardening**

- **Critical Infrastructure Improvements**
  - Extreme Wind Loading Construction Standard
  - Focus continues on critical infrastructure upgrades
  - Hospitals, first responders, storm shelters, critical load, etc...
  - Projects in all three Districts
  - Completed 6 projects in 2018
  - No projects impacted by storm events
  - No undergrounding pilots at this time

- **Construction Program and Standards**
  - Gulf is consulting with FPL regarding best practices, construction methods, and material options
Transmission Storm Hardening Measures

• Completed previous programs associated with storm guying and wooden cross arm replacements in 2018

• Begin wooden structure replacement program in 2019 as part of new Storm Hardening Filing
  – Multi-year program

• Begin in 2019 a Substation Flooding Monitoring program at 13 substations and hardening of several substation switch houses
Preparation

Drills – Training - Improvement

• 2019 storm drill scheduled for April 25th
• Plan to attend FPL drill on May 2nd
• 2018 storm drill
  – Full Activation of Storm Center
  – Engaged as many employees as possible
  – Cyber Drill
• Ongoing refresher training
• Every employee has a storm assignment
• New Employee Orientation
• Continued improvement of processes
• Implementation of Best Practices
  – Drill
  – Hurricane Michael
Customer Communication

• Continue to focus on customer communication before, during, and after any event.
Hurricane Michael Communication

DEBRIS PICKUP SAFETY

Do not make contact with power lines when picking up debris.

Debris should be no higher than 15’ above ground level. Do not walk or crawl under power lines. Debris that is stacked above this level gets caught on power lines.

Gulf Power

Estimated Restoration Time

For 95% of the customers that are able to take electric service.

Damage to Your Home’s Service Connection

1. INDOOR SERVICE
   - Do not touch any breakers, switches, or outlets until you turn off the power.

2. UNDERGROUND SERVICE
   - Do not attempt to dig or dig up any underground service lines. Contact your utility company.

3. DAMAGE TO SERVICE "ON" THE SERVICE PANEL
   - Contact your utility company to report the damage.

4. SERVICE PROTECTION
   - Service may remain turned off until the damage is repaired.

5. Service will be restored as soon as possible after the damage is repaired.

For more information, call 888-642-5340.
Governmental Communication

- Pre-storm season identification of critical infrastructure
- Cooperation in planning and restoration
- Employees in County EOCs
- Employees in State EOC
- Participation in County and State Drills
Communication

Distribution Construction and Maintenance

- Third-Party Attachers and Joint Use Partners
  - Continue to meet with bi-annually across the system
  - Planned distribution major projects
  - Construction standards and pole loading
  - Pole inspection program
  - Pole removal program
  - Storm communications

- Forestry Services
  - Communications with members of the community and government officials concerning vegetation management projects, right of way maintenance, new construction projects, and company construction projects
  - Seven certified arborists on staff
Post Storm Restoration Plans

- 2019 Storm Procedures are being updated
  - FPL Best Practices and NextEra Support Model
- Review of all contracts, contacts, and arrangements
  - Catering
  - Accommodations
  - Staging Sites
  - Transportation
- Material and fuel inventory levels are increased during storm season
- Mutual Assistance
  - Southeastern Electric Exchange (SEE)
  - Edison Electric Institute (EEI)
  - 9 additional Agreements within the State through FCG
  - NextEra affiliate
Forensic Data Collection

• Distribution
  – Contract with third party to assist with data collection
  – Data transfer tested annual
  – Designed to not slow down restoration efforts
  – Third party data analysis

• Transmission
  – Initial collection of data during aerial patrol
  – On-site details collected by engineering personnel
  – Post analysis and reporting
Restoration

Off-system Support 2018

- Hurricane Maria – Puerto Rico
- Severe Weather – Alabama Power
Hurricane Michael – Panama City

13 Day Restoration Effort
6600 Outside Resources
8 Staging Sites
7000 Distribution Poles Replaced
200 Miles of Dist. Line Replaced
194 Trans. Structures Damaged
~9000 still cannot take power
Restoration

Emergency Response Awards
Recovery Award