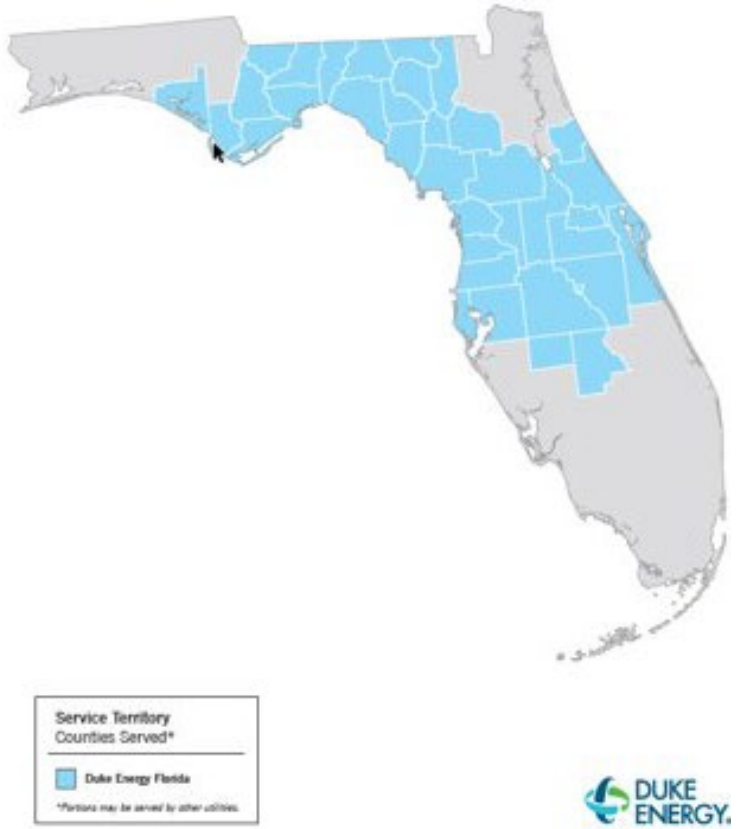
Customer Delivery

Duke Energy Florida
Geoff Haslett- Mgr. Emergency Preparedness

Duke Energy Florida

- Duke Energy Florida serves approximately 1.9 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 22 power generation sites capable of producing ~11,000 megawatts of electricity.



Customer Delivery

Storm Preparations and Restoration Process

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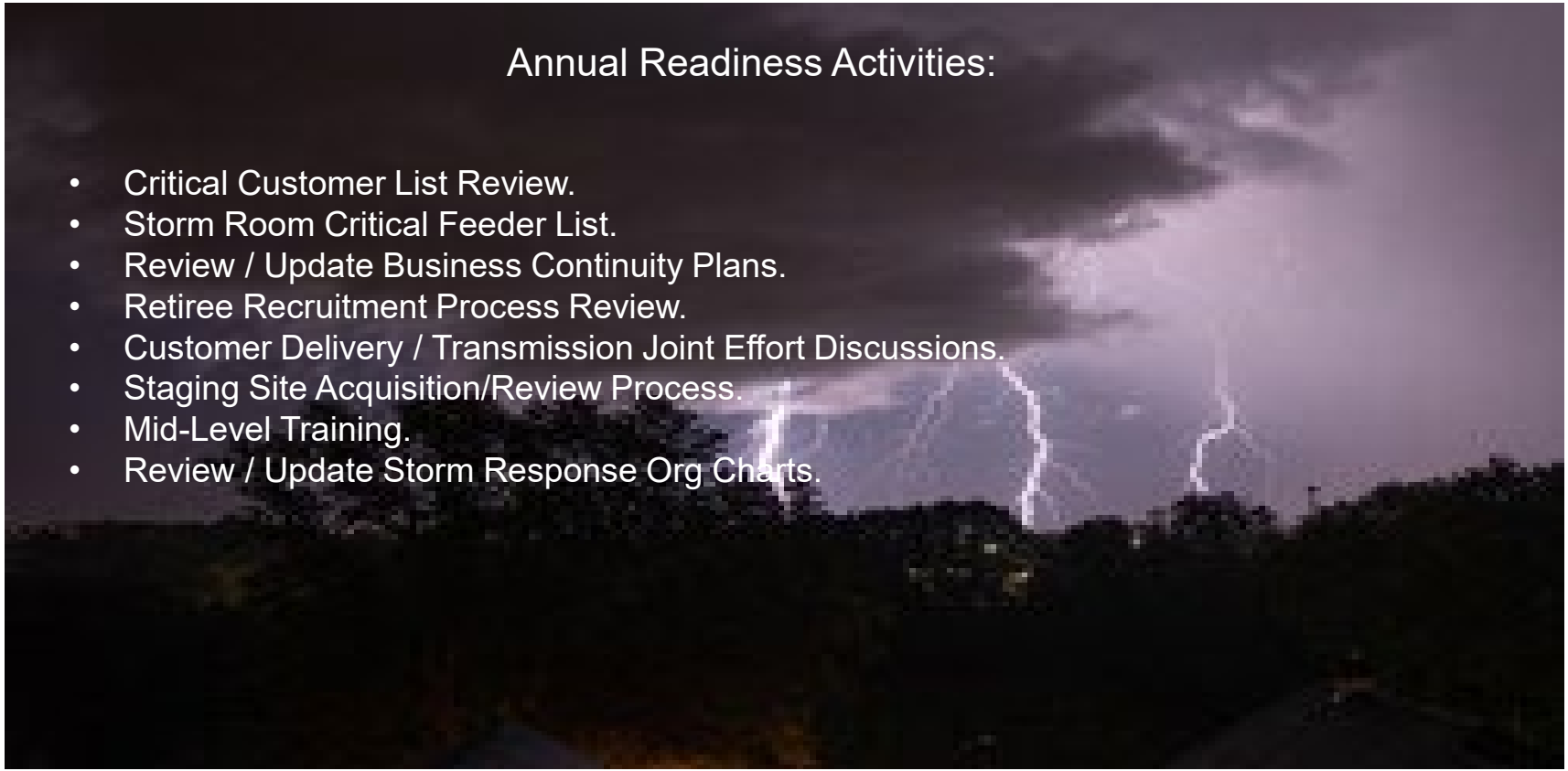
Preparedness Activities



Annual Readiness Activities:

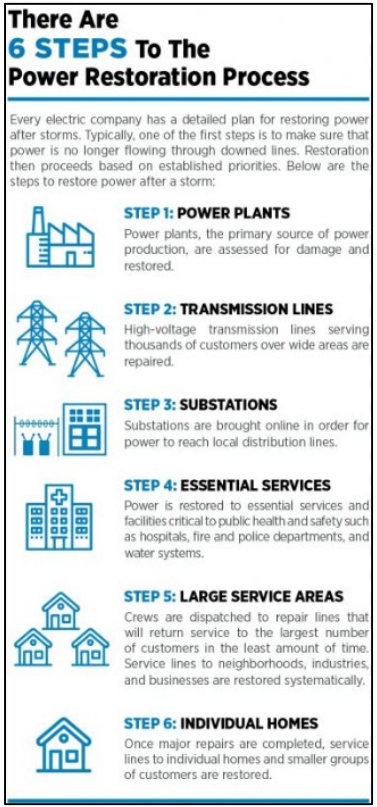
- Critical Customer List Review.
- Storm Room Critical Feeder List.
- Review / Update Business Continuity Plans.
- Retiree Recruitment Process Review.
- Customer Delivery / Transmission Joint Effort Discussions.
- Staging Site Acquisition/Review Process.
- Mid-Level Training.
- Review / Update Storm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

Storm Drill 2023

Major Storm Drill

- Review IMT hierarchy.
- Storm charging guidance review.
- Provide training on storm tools / applications.
- Meteorology 2023 forecast.
- Activate basecamps / staging sites and assign resources.
- Develop ETR & Communication Strategies.
- Mobilization & Demobilization of Resources.

Restoration Process



There Are
6 STEPS To The
Power Restoration Process

Every electric company has a detailed plan for restoring power after storms. Typically, one of the first steps is to make sure that power is no longer flowing through downed lines. Restoration then proceeds based on established priorities. Below are the steps to restore power after a storm:

STEP 1: POWER PLANTS
Power plants, the primary source of power production, are assessed for damage and restored.

STEP 2: TRANSMISSION LINES
High-voltage transmission lines serving thousands of customers over wide areas are repaired.

STEP 3: SUBSTATIONS
Substations are brought online in order for power to reach local distribution lines.

STEP 4: ESSENTIAL SERVICES
Power is restored to essential services and facilities critical to public health and safety such as hospitals, fire and police departments, and water systems.

STEP 5: LARGE SERVICE AREAS
Crews are dispatched to repair lines that will return service to the largest number of customers in the least amount of time. Service lines to neighborhoods, industries, and businesses are restored systematically.

STEP 6: INDIVIDUAL HOMES
Once major repairs are completed, service lines to individual homes and smaller groups of customers are restored.

- Public Safety
- Critical Customers / Infrastructure
- Largest Devices / Longest Duration
- Main lines restored
- Customer Communications
  - Defined and deliberate customer messaging
  - Accurate ETR's
- Targeted Damage Assessments
  - Crew Efficiency

Storm Hardening

Criteria

Sectionalizing Guidelines

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

Currently have ~63% of our customers on automation and ~48% on a self-healing grid

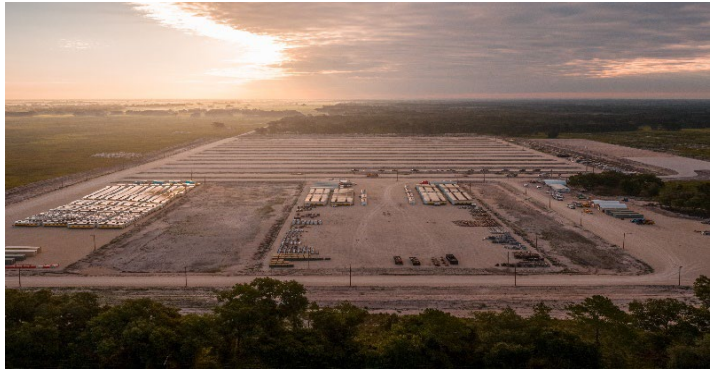
By year-end 2025 we anticipate having 100% on automation with 80% on a self-healing grid

Benefits

- During Hurricane Ian, it is estimated that the grid automation restored more than 166k customer outages and saved ~196M customer minutes of interruption.

- During Hurricane Nicole it is estimated that the grid automation restored more than 55k customer outages and 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.

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.

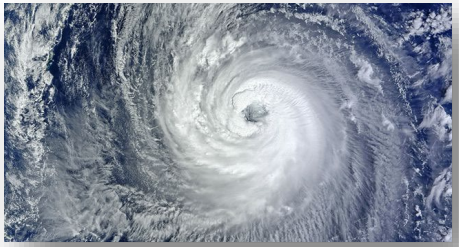
Customer / Stakeholder Outreach and Communication

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.

Pre-Storm Customer Communications

Press Releases



Duke Energy urges customers in Florida to prepare for potential impacts from Subtropical Storm Nicole

November 8, 2022

- **Impacts may be felt broadly across the company's service area**
- **Line and tree crews ready to respond to outages**

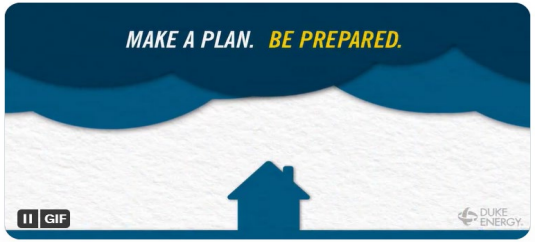
ST. PETERSBURG, Fla. – Duke Energy is closely monitoring the approach of Subtropical Storm Nicole and preparing for potential impacts on Florida in the coming days. The company urges customers to prepare as well.

Company meteorologists are tracking the storm, which has the potential to bring damaging winds, heavy rain and localized flooding to portions of the company's service area throughout Florida.

Tweets

Duke Energy @DukeEnergy · Sep 26, 2022

Our meteorologists are tracking #Ian as it makes it way to the Florida coast. We're preparing now and so should you. Visit our Storm Center for important preparation tips on how to stay safe before, during and after a storm: spr.ly/6013MkHdS.



Duke Energy
@DukeEnergy

We're tracking #Ian as it gets closer to Florida. Be prepared. Gather emergency supplies including bottled water, non-perishable food, a weather radio, a flashlight, cash & medication. If you experience an outage, report it by texting OUT to 57801.

Direct Customer Communication

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Preparing for the arrival of Hurricane Ian

Based on the current projected track and forecast for Ian, our crews are diligently preparing for significant impacts to our service area and will be ready to respond. The storm is expected to rapidly intensify and transition to a strong hurricane as it reaches the gulf. A hurricane's path is often difficult to predict, so regardless of where you are in the state, we encourage you to prepare as well.

- Visit our Storm Center for tips on ways to stay safe before, during and after severe weather hits.
- If you experience a power outage, please report it on our website or through our mobile app, or text OUT to 57801, or call 800.228.8485.
- Stay informed – make sure you are signed up to receive Outage Alerts and bookmark our Outage Map to stay updated on estimated restoration times.

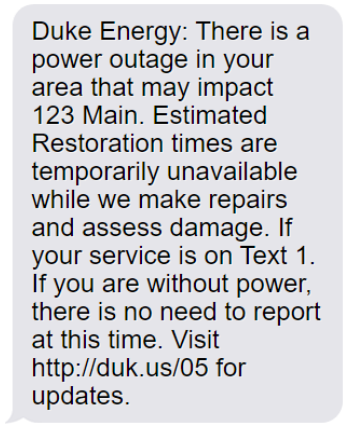
Communication Campaigns

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

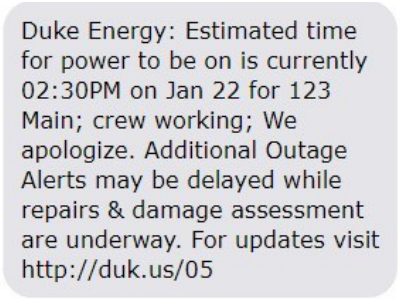
1. Initial Out Campaign – This is the campaign that notifies customers the we are aware of their outage. If available, the system generated ITR can also be included here. Except for technical issues, this campaign will typically stay on.

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

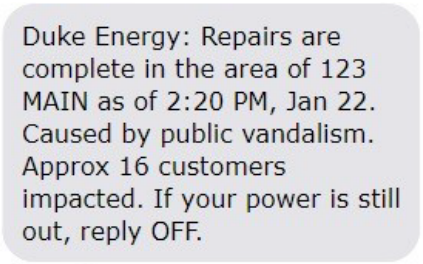
3. Restoration Campaigns – This campaign notifies the customer that we have restored power to their area. This can also be disabled during large storms.



Initial Out Campaign (OMS ITRs Off)



ETR Campaign (OMS ITRs Off)



Restoration Campaign

Third Party Attachers

- Joint-Use Equipment

  - Joint Use Equipment in DEF:
    - Approximately 1,000,000 poles throughout our distribution system.
    - 800,000 have a third-party attacher (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.

Vegetation Management

Vegetation Management

Customer Delivery

Trim Cycles

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

2022 Results

- Performed vegetation work on 8,493 customer requests.
- Performed vegetation work to support approximately 7,268 design work orders.
- Removed 14,320 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	2022 (Actuals)	2023 (Projected)
NERC (>200 kV)	72	38
Non-NERC (<200 kV)	429	481
Total Planned Work Mileage	501	519

Pole Inspections

Inspection Process & 2022 Results

Distribution

- Poles are inspected on an eight-year cycle
  - Currently in year two of our eight-year cycle.
- 159,743 poles were inspected in 2022
  - 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
  - 1,395 wood poles were inspected in 2022
  - Less than one percent were priority ground line rejects.
- Steel/Concrete Poles & Lattice Towers are inspected on a 6-year cycle
  - 3,289 structure towers were inspected in 2022

Customer Delivery

Lesson's Learned

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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.
- Traffic conditions once roadways were returned open (Pine Island).
- Crew rosters.

Questions?


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