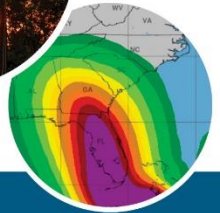


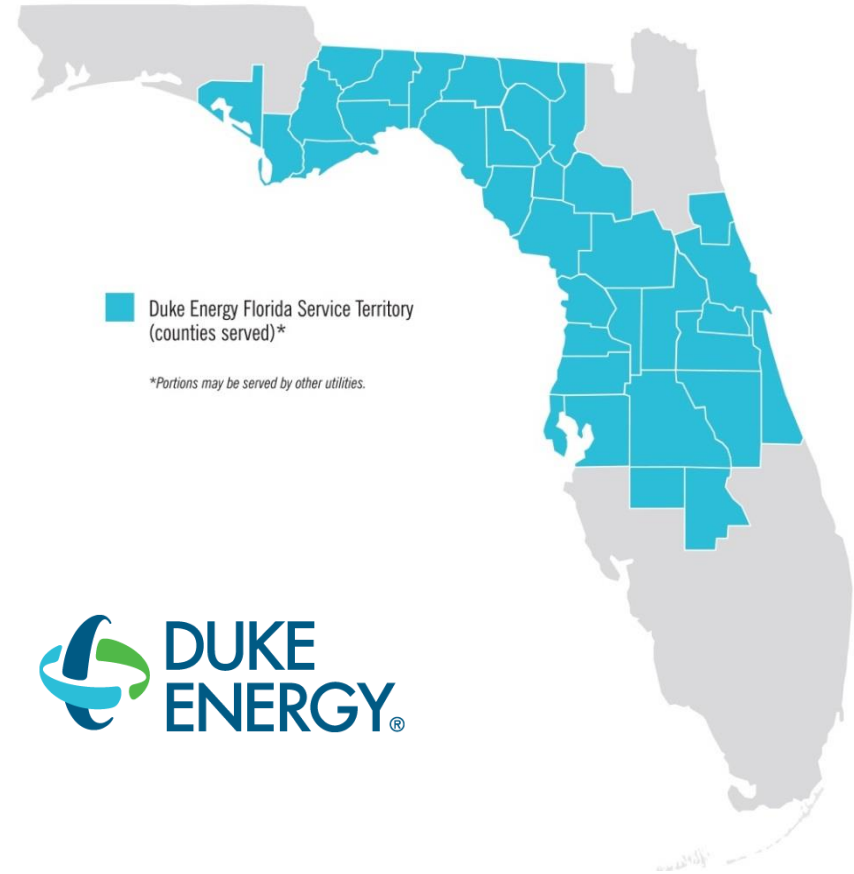
Florida Public Service Commission Hurricane Season Workshop 2022



At Duke Energy Florida, we power more than 4 million lives

Service territory includes:

- Service to 1.9 million retail customers in 35 counties
- 13,000 square miles
- More than 5,200 miles of transmission lines and 32,000 miles of distribution lines
- Owns and operates nearly 11,000 MW of generating capacity
- Fuel Mix
 - Gas – 77%
 - Coal – 11%
 - Purchased Power – 10%
 - Solar – 2%



Duke Energy Florida is prepared for 2022 hurricane season

Operational preparation is a year-round activity

- Transmission & Distribution Systems Inspected and Maintained
- Storm Organizations Drilled & Prepared
- Internal and External Resource Needs Secured
- Response Plan Continuously Improved

Coordination with County and State EOC Leaders

- Structured Engagement and Information Sharing Before, During and After Hurricane
- Coordination with County EOC Priorities
- Public Communications and Outreach



RESTORATION

1. Transmission Lines

2. Substations

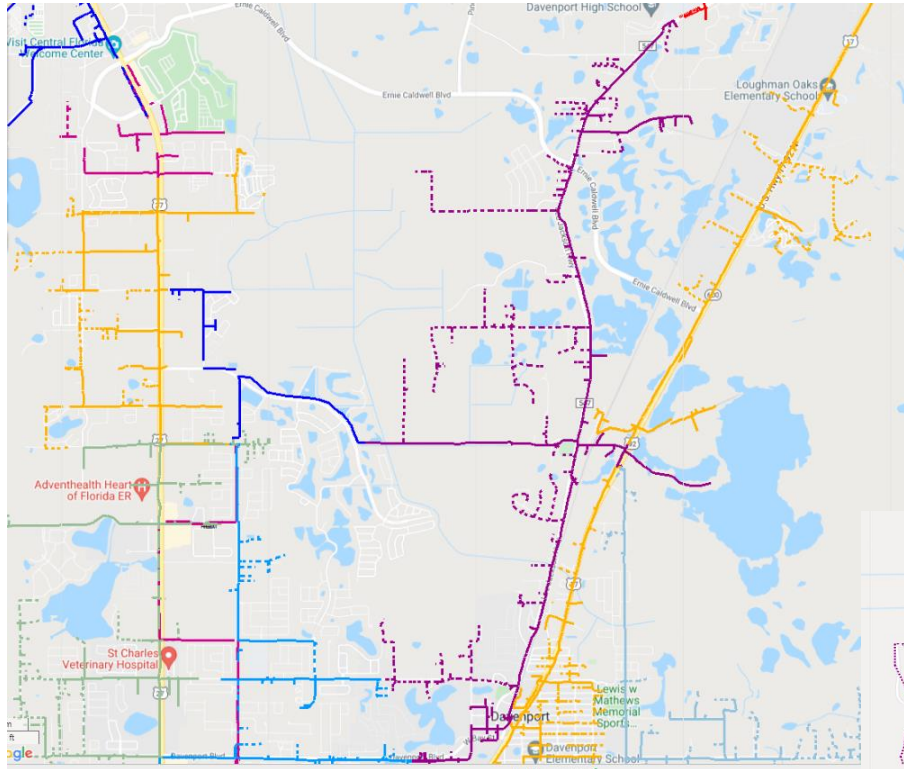
3. Critical Infrastructure

4. High-density Neighborhoods

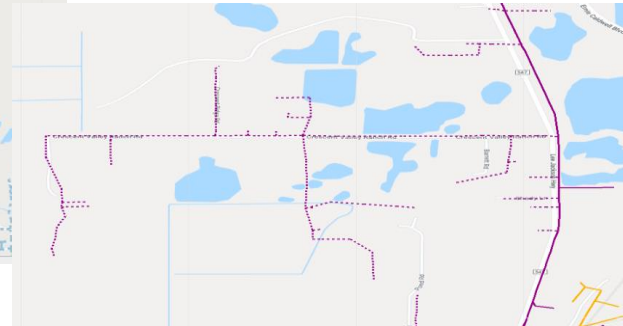
5. Individual Homes



Restoration Process (AIR)



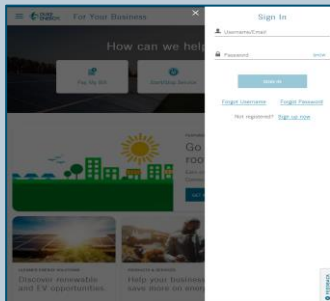
- Public Safety
- Main Lines Restored
- Customer Communications
 - Defined and deliberate messaging
 - Accurate ETR's
- Targeted Damage Assessments
 - Crew Efficiency
- Accurate Restoration Trending



Available Digital Channels

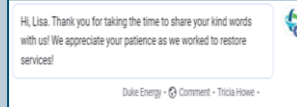
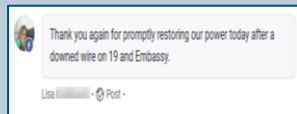
Web

*~1.8M total
MyAccount logins in
2022*



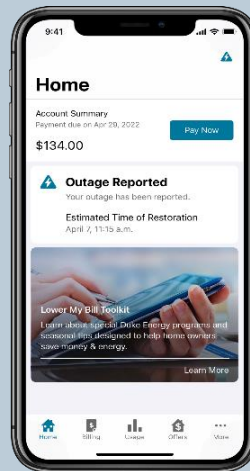
Social Media

*Almost 2,000
inbound customer
care messages in
social media
channels in 2022*



Mobile App

*840k users with 3M
logins in 2022*



IVR

*~56.8% of customers
calling in through the
IVR in 2022 self-
served in a digital
channel*

"Need service today or over the weekend? Duke Energy has recently enabled same day and Saturday options online at dukeenergy.com forward slash start. Be sure to have your new address, social security number and date you would like service to begin. For faster service, I can text you a link to an online form to start service today or even over the weekend."

Direct to Customer Communications Capabilities

Email/App Communications Capabilities

Residential	1,065,000
Business	19,000
App Users	860,000

Outage Alert Enrollment

Email	300,000
Text	850,000
Outbound Calls	88,000
<hr/> TOTAL	<hr/> 1.24 Million

Continuous Improvements to Customer Communications

Proactive Outage Alerts Campaigns

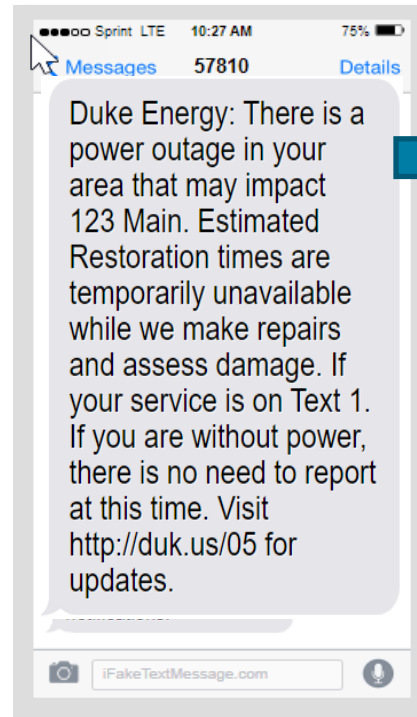
There are three main 'campaigns' within Outage Alerts that are used to keep customers informed. Each can be turned on or off independently of one another.

1. Initial Out Campaign – This is the campaign that notifies customers that 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.

Note: Only the first 8 characters of the address are sent for legal protection.



Initial Out Campaign
(OMS ITRs Off)

Duke Energy: Estimated time for power to be on is currently 02:30PM on Jan 22 for 123 Main; crew working; We apologize. Additional Outage Alerts may be delayed while repairs & damage assessment are underway. For updates visit <http://duk.us/05>

ETR Campaign
(OMS ITRs off)

Duke Energy: Repairs are complete in the area of 123 MAIN as of 2:20 PM, Jan 22. Caused by public vandalism. Approx 16 customers impacted. If your power is still out, reply OFF.

Restoration Campaign

Customer Options – Outage Details Still Available

DUKE ENERGY | Report Outage

i If you see a fallen power line or safety hazard involving our equipment, call Duke Energy at 800.POWERON (800.769.3766), or call 911 immediately. Do not touch a power line or anything in contact with it, and keep others away until help arrives.

Find Account Outage Details Review

How can we find your account(s)?

Account Number > Phone Number > Social Security Number >

Federal Tax ID > I Am Not a Duke Customer >

CANCEL

BUILDING A SMARTER ENERGY FUTURE™

DUKE ENERGY | Report Outage

i An outage has already been reported in your area. Your outage has been reported as well.

The outage was first reported on **January 13, 2021 9:41 a.m.** The details of the outage are shown below. We will notify you as the status of your outage changes.

If there's additional information pertaining to your outage that you'd like to make us aware of, [continue reporting your outage.](#)

Estimated Time of Restoration
January 13, 2021 5:00 p.m.

Status
Active

Cause
The outage was caused by fallen trees or limbs damaging our equipment.

Customers Without Power
74

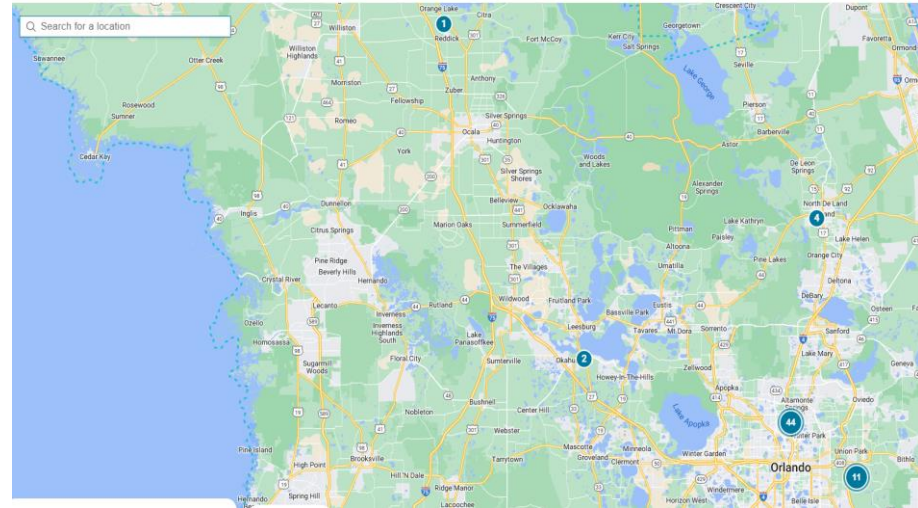
First Reported
January 13, 2021 9:41 a.m.

Notification Preferences [Edit](#)

Text Message
(828) 513-####

We'll notify with an estimated restoration time and when your power has been restored.

DUKE ENERGY | Outages in Florida



- Customers can access details about their outage via the Map, DE.com or the IVR
- Ad hoc messaging frequently drives customers to the Outage Map

Vegetation Management

Distribution

- All identified pruning, overhang and tree removal locations will be completed by June 1, 2022. In addition to these programs, DEF also performed reactive mid-cycle pruning in 2021 on over 5,139 trim locations and over 13,726 removals.

Transmission

- DEF's Transmission Integrated Vegetation Management (IVM) Program includes the following: planned threat and condition-based maintenance; reactive work including hazard tree mitigation; brush management (herbicide, mowing and hand-cutting operation); and focusing on ensuring the safe and reliable operation of the Transmission system.
- The goal is to minimize vegetation-related interruptions and ensure adequate conductor-to-vegetation clearances while maintaining compliance with regulatory, environmental and safety requirements/standards.

Results of utility trimming in 2021

- Distribution: In 2021, DEF pruned 4,517 miles on the distribution system.
- Transmission: In 2021, DEF performed planned maintenance work on 397.52 miles.





BUILDING A SMARTER ENERGY FUTURE ®

TOPICS FOR DISCUSSION

Storm Preparation and Restoration Processes

Utility hurricane drills scheduled for 2022: hurricane drills were held on April 5, 6 and 7 modeling the impacts of a Category 3 hurricane making landfall on the east coast of Florida. Refresher training continues into hurricane season and will be repeated in Q3 as needed.

Mutual aid agreements for restoration 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 more than 100 line, vegetation management, logistics and damage assessment vendors.

Availability and inventory of equipment needed for restoration: 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.

Customer/Stakeholder Outreach and Communication

Status of meetings between the utility and city/county/state EOCs concerning storm preparedness and priority lists

- DEF performs annual reviews internally and DEF's EOC representatives and Government and Community Relations managers are in continuous contact with the state and county EOCs within DEF's service territory to review storm preparedness and critical priority lists. These visits typically begin in March.

Utility staffing assignments at local EOCs

- DEF has 49 staff members providing support directly to the county and state EOCs in the role of EOC representative. DEF also had an additional 58 staff members providing support, including Liaison Incident Command Staff, government and community relations and operations support dedicated to EOC priority requests.

Customer communication messaging on storm preparation and on restoration efforts

Prior to hurricane season, DEF distributes a comprehensive, multi-channel campaign for late May that features emails, newsletters, social media posts, news releases, advertising in hurricane guides, articles on our Illumination website and content for local media outlets, that educates customers on a host of topics including: We use a numerous communications and multi-media channels to communicate to customers and other external audiences using mass media and direct-to-customer channels. Communications are developed and distributed during each phase of a hurricane event: preparedness, assessment phase, restoration phase and “Thank You” after restoration is complete.

- Safety and preparedness
- Outage Alerts enrollment
- Restoration processes
- Storm Center on Duke-Energy.co,
- The Outage Map and ways to report outages; and
- Storm-related videos

During restoration, DEF’s proactive communications are often supplemented with additional messaging, delivered through the same channels to ensure customers are receiving frequent updates when outage duration is significant. Our Customer Experience Team works closely with operations to ensure customers are kept informed during extended outage events. These periodic updates have become a standard part of our processes during major storm events.

Status of meetings/coordination with third-party attachers regarding restoration efforts

When activated for a hurricane, DEF staffs the ESF 12 Energy desk in State and County Emergency Operations Centers, where logistics and restoration priority coordination with third-party attachers occur through the ESF 2 Communications function. Outside of hurricane activation, DEF informs communication carriers approximately 3-4 months in advance of Storm Protection Plan projects that may impact joint-use poles. At that time, communication carriers have the option to purchase the poles DEF intends to abandon. If the carrier opts to purchase, DEF will manage the purchase and invoice process, remove its electric facilities from the pole, and attach a placard identifying carrier-specific pole ownership.

Vegetation Management

Distribution

DEF performs pruning on Distribution Feeder backbones on a three-year weighted average cycle and Distribution Laterals on a five-year weighted average cycle. DEF balances this goal against overall system reliability, customer impact and cost effectiveness. DEF's 2021 Vegetation Management program achieved the feeder and lateral maintenance cycle commitments. In addition to regular trim cycles, DEF performs additional trimming on each system before hurricane season. Between February 1 and April 15, storm-hardening patrols were completed on all Distribution Feeders. While DEF does not typically prune contiguous additional miles associated with these patrols, all 3-phase circuitry is patrolled, and immediate threats are addressed.

- **All identified pruning, overhang and tree removal locations will be completed by June 1, 2022. In addition to these programs, DEF also performed reactive mid-cycle pruning in 2021 on over 5,139 trim locations and over 13,726 removals**

Transmission

DEF's Transmission Integrated Vegetation Management (IVM) Program includes the following: planned threat and condition-based maintenance; reactive work including hazard tree mitigation; brush management (herbicide, mowing and hand-cutting operation); and focusing on ensuring the safe and reliable operation of the Transmission system. The goal is to minimize vegetation-related interruptions and ensure adequate conductor-to-vegetation clearances while maintaining compliance with regulatory, environmental and safety requirements/standards.

Results of utility trimming in 2021

Distribution: In 2021, DEF pruned 4,517 miles on the Distribution system. Transmission: In 2021, DEF performed planned maintenance work on 397.52 miles.

Pole Inspections -- Current pole inspection cycles for the distribution and transmission system

Distribution: 8-year inspection cycle

Transmission:

- Wood Poles – visual inspection completed every 4 years, sound and bore inspections completed every 8 years
- Non-wood – visual inspection completed every 6 years

Duke Energy Florida (Distribution) Annual Wood Pole Inspection Report (Reporting Year 2021)

a	b	c	d	e	f	g	h	i	j	k	l	m
Total # of Wooden Poles in the Company Inventory	# Of Pole Inspections Planned this Annual Inspection	# Of Poles Inspected this Annual Inspection	# Of Poles Failing Inspection this Annual Inspection	Pole Failure Rate (%) this Annual Inspection	# Of Poles Designated for Replacement this Annual Inspection	Total # of Poles Replaced this Annual Inspection	# Of Poles Requiring Minor Follow-up this Annual Inspection	# Of Poles Overloaded this Annual Inspection	Method(s) V = Visual E = Excavation P = Prod S = Sound B = Bore	# Of Pole Inspections Planned for Next Annual Inspection Cycle	Total # of Poles Inspected (Cumulative) in the 8-Year Cycle to Date	% Of Poles Inspected (Cumulative) in the 8-Year Cycle To Date
821,080	100,000	121,224	1,163	0.96%	720	2,251	2,267	N/A	V, E, S, B, P	100.000	792,736	96.5%
If b - c > 0, provide explanation		N/A										
If d - g > 0, provide explanation		N/A										
Description of selection criteria for inspections		Poles for inspection in 2021 were chosen based on geographic location to complete cycle 2.										

- Poles noted in column d are for ground line rejects only. Additional poles are replaced based on pole top issues, but are not included in this number.
- Failure rate in column e is for ground line rejects only.

Lessons Learned

Discuss improvements in preparation and restoration based upon lessons learned from previous hurricane seasons

- DEF is improving the grid to avoid outages and restore power faster. In 2021, smart, self-healing technology helped to avoid nearly 250,000 extended customer outages in Florida, saving 17 million CMI.
- DEF completed a multiyear effort to upgrade nearly 2 million customer meters to smart meters – digital meters that offer customers more options and improved service. Ping-it is a smart meter technology that enables remote confirmation of outage status in seconds. Ping-it allows DEF to ensure all customers in an area, including those not home due to evacuation, have been restored before crews relocate complete restoration elsewhere.
- Increased access to alternative housing options (sleeper trailers) and vendors so that restoration crews can be located closer to areas of damage.
- Increased daylight productivity through daily timesheet review and meal/fuel exception process. In 2021, DEF implemented a smartphone app and web portal to streamline the process.