

# Florida Public Power

## PSC Hurricane Preparedness Workshop 2019

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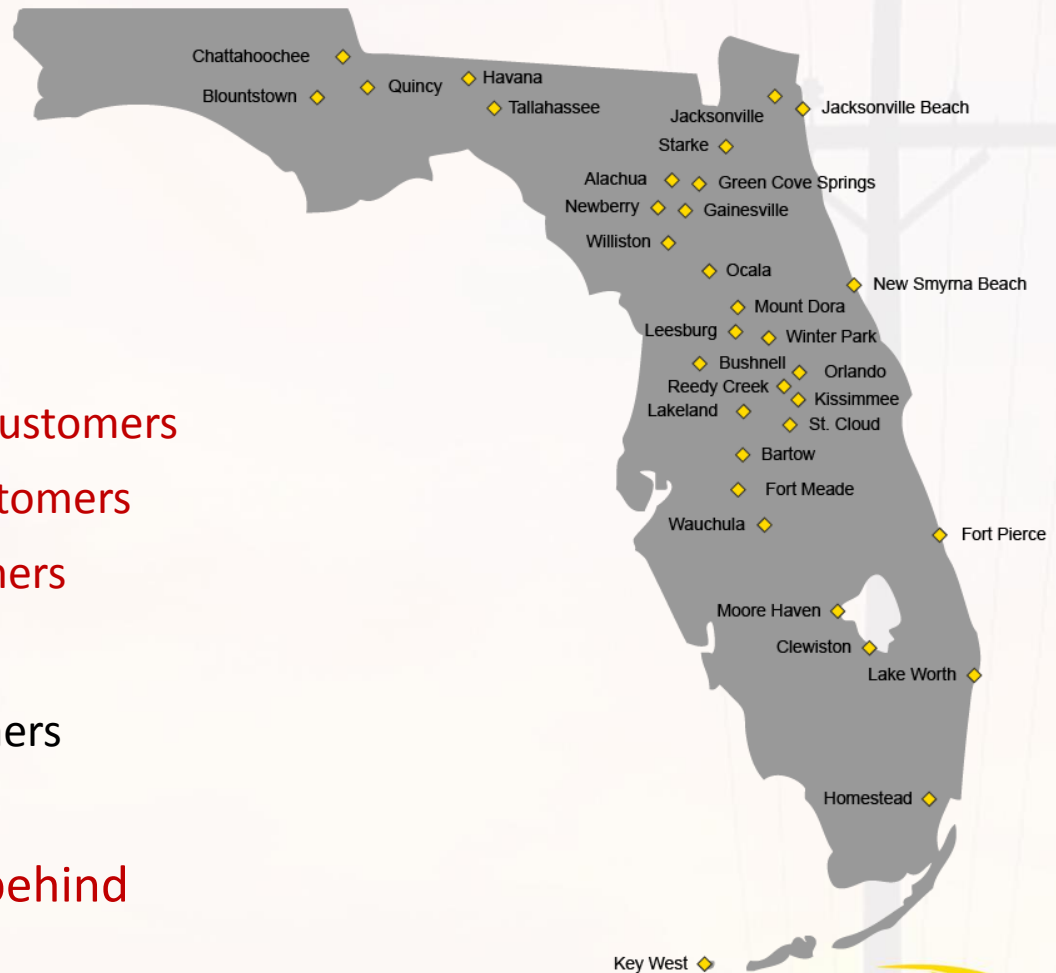
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# Florida Public Power

- 33 municipal electric utilities
- 1.4 million customer meters
- 14% of Florida's population
- Large Utilities
  - JEA (Jacksonville): 404,000 customers
  - OUC (Orlando): 244,000 customers
  - Tallahassee: 122,000 customers
- Small Utilities
  - Moore Haven: 1,015 customers
  - Bushnell: 1,065 customers
- Combined, 3<sup>rd</sup> largest utility behind FPL & Duke Energy Florida



# Public Power Nationally

2,011 PUBLIC POWER UTILITIES PROVIDE ELECTRICITY TO 49 MILLION PEOPLE\* IN 49 STATES AND 5 U.S. TERRITORIES

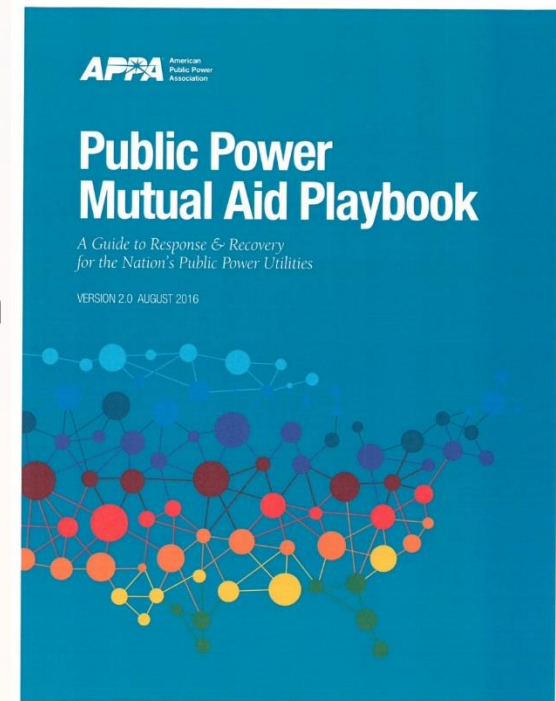


**1** IN **7** ELECTRICITY CUSTOMERS IN THE U.S. ARE SERVED BY **PUBLIC POWER**

# Public Power Mutual Aid

# Procedures

- FMEA coordinates mutual aid support for its members
  - Serves as statewide mutual aid network coordinator
  - Works directly with national association (APPA) and other network coordinators
    - Meet together in person twice a year
    - Hold table top exercises
  - Member utilities communicate needs (or availability) to FMEA



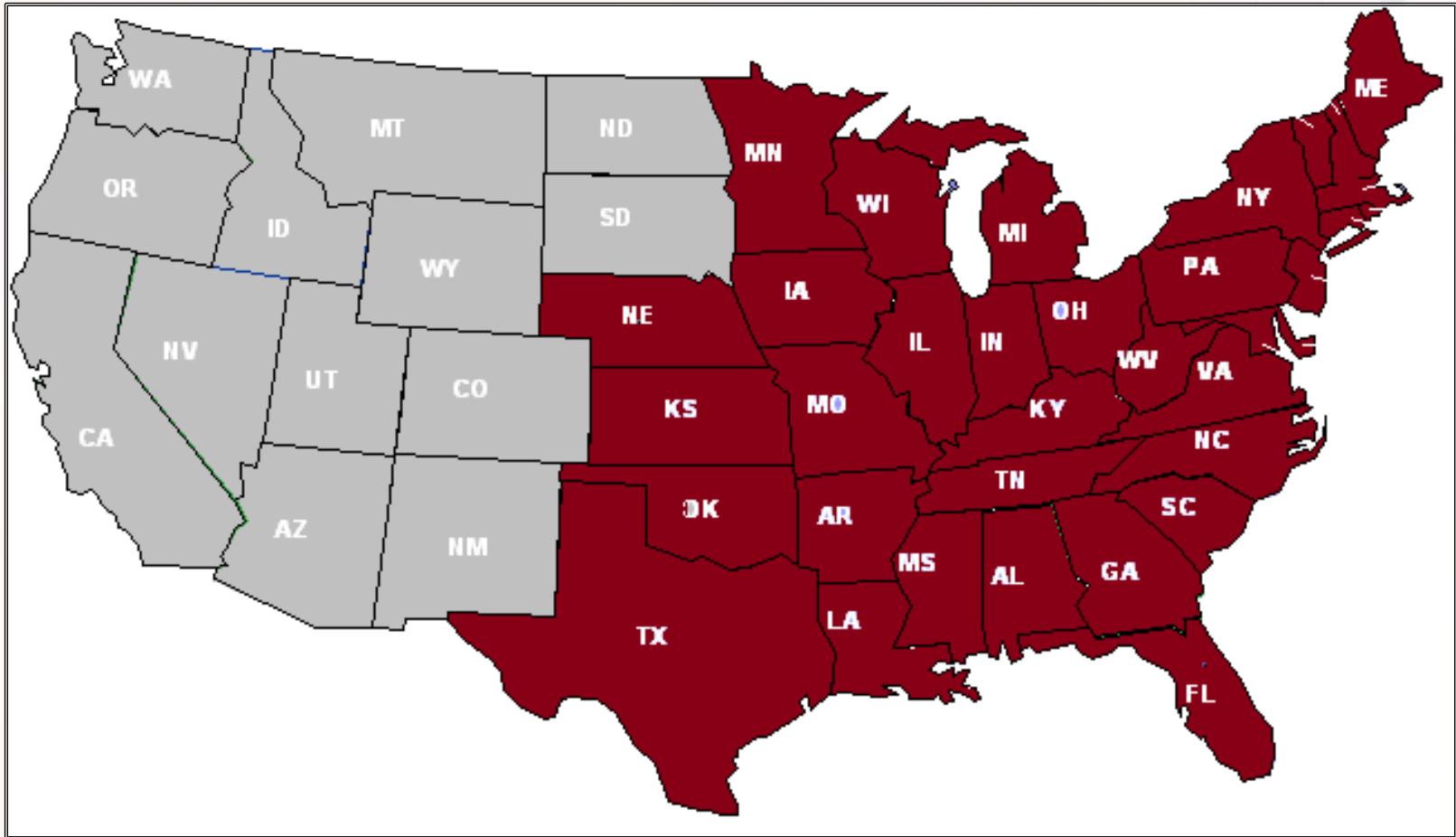
# Public Power Mutual Aid

## Many Options

- Florida Mutual Aid
  - Mutual Aid agreements in place between public power and all Florida electric utilities
- Southeastern Mutual Aid
- National Mutual Aid
  - More than 2,000 municipal electric utilities
  - More than 800 electric cooperatives



# Mutual Aid – Near and Far



# Disaster Preparedness

## Year-Round Planning

- Public Power prepares year round
  - Review and Update Internal Plans
- FMEA conducts pre-season preparation workshop with members
- Participate in statewide FCG mutual aid workshop
- Individual utilities conduct exercises, briefings and meetings to discuss their preparation
  - FMEA participates in state EOC and national Association
- Municipal electric utilities coordinate with all city departments, including local EOCs



# Disaster Preparedness

- All municipal utilities conduct pole inspections, at a minimum, on an 8-yr cycle.
  - Many more frequently
- Since 2007, pole replacement has been in the range of 2-10%

## Pole Inspections And Replacement





# Disaster Preparedness

## Vegetation Management

- FMEA members generally on a 3-year trim cycle
- Our local governing boards and customers seek the improved aesthetics and reliability from a 3-year cycle
- Right tree, right place



# Disaster Preparedness

- Develop pre-written social media responses
  - Preparedness, pre-storm, post-storm, safety
- Use various platforms
  - Facebook, Twitter, News, Text-Alerts
- Communicate often
  - Restoration process
  - Areas being worked

# Communications





# Storm Center



## Be Prepared for Hurricane Season

At Kissimmee Utility Authority, we're always preparing for the next storm season – and we're committed to helping you prepare, too.

Be prepared for this year's hurricane season by exploring KUA's 2018 Osceola Hurricane Handbook. You can download it by clicking on the image on the page.

To receive a copy of the printed handbook by mail, residents should contact KUA at [407-933-9838](tel:407-933-9838) or by e-mail at [hurricane@kua.com](mailto:hurricane@kua.com).

### Hurricane Season Links

#### KUA

- Web – [www.kua.com](http://www.kua.com)
- Facebook – [www.facebook.com/mykua](http://www.facebook.com/mykua)
- YouTube – [www.youtube.com/kuadirect](http://www.youtube.com/kuadirect)
- Twitter – [www.twitter.com/kuadirect](http://www.twitter.com/kuadirect)





# Disaster Preparedness

# JEA

# Restoration 1, 2, 3



## HOW JEA RESTORES POWER AFTER A STORM AND HOW YOU CAN HELP



### BEFORE THE STORM

**STORM HARDENING:**  
In the past five years, JEA has invested hundreds of millions of dollars in hardening our electric, water and sewer systems to make them more resistant to storm-related disruptions. These critical repairs and improvements help us restore power and return to normal operations more quickly after a major storm.

**TRIMMING TREE THREATS:**  
While strong winds and heavy rains cause their share of storm damage, most storm-related power outages result from tree branches falling on power lines. That makes some sections of our city – those with the most mature trees – more susceptible to service interruptions when a major storm hits. To reduce the risk of downed branches causing outages during a storm, JEA trims trees across the city all year long, working on a 2.5-year cycle to cover JEA's 900-square-mile service territory.

**WATER AND SEWER UPGRADES:**  
We've invested millions in upgrading our water and sewer facilities, and have installed backup generators to reduce the risk of storm-related service interruptions.



### DURING THE STORM

At the height of a major storm, JEA personnel are in place, monitoring the weather and assessing the impact on our facilities. Our Emergency Operations Center works around the clock. Key personnel are deployed out in the field to alert us to any serious system failures. And our linemen are in position, waiting for weather conditions to improve to the point that it is safe for them to begin restoring power.



### AFTER THE STORM

Once the height of the storm passes and weather reports indicate it is safe, JEA immediately enters the restoration phase of our emergency operations. Our "Restoration 1-2-3" process is designed to assess and repair our facilities and restore power across our service territory as quickly and safely as possible.



## RESTORATION 1 • 2 • 3

### PHASE 1: PUBLIC SAFETY

As soon as weather conditions permit, JEA begins assessing our facilities, making critical repairs to our power plants, transmission lines, substations, and water and sewer facilities. We then restore power to our local hospitals, shelters, and police and fire stations, and make repairs to the "backbone" of our electric grid that will bring the majority of our customers back into power as quickly as possible.

**WHAT YOU CAN DO:**  **STAY SAFE:**  
Phase 1 is our public safety phase, and we appreciate your patience as we restore these critical services first. If possible, stay off the roads and avoid downed power lines.

**KNOW WE'RE ON IT:**  
Just as you'd pull over on the highway to let an ambulance pass, you can help us save lives and restore power to everyone faster by waiting for the announcement that JEA is accepting outage reports from individual customers.

### PHASE 2: INDIVIDUAL CUSTOMERS

With public safety repairs complete, JEA will move to Phase 2 and encourage individual customers to report their power outages. Utility crews now begin making repairs by electric "circuits" – repairing an entire circuit of approximately 2,500 homes before moving on to another circuit. Priority is given to making repairs that will restore power to the most customers.

**WHAT YOU CAN DO:**  
**REPORT YOUR OUTAGE:**  
Call (904) 665-6000 or visit [jea.com/outage](http://jea.com/outage) to report your power outage. If you've already registered for JEA alerts, you can also text "OUT" to MyJEA (69532).



### PHASE 3: FINAL REPAIRS

When repairs to all major circuits are complete, JEA will enter Phase 3, targeting the few remaining isolated outages. We know this phase can be the most frustrating for those few customers who are still without power, and we appreciate your continued patience as we direct all our resources toward completing the restoration process. Rest assured, we won't stop until everyone has power.

**WHAT YOU CAN DO:**  **IF YOU STILL DON'T HAVE POWER:**  
Sometimes, major storms can cause damage to your home that will prevent your power from coming back on even though JEA has made all necessary repairs to your circuit. If everyone else in your neighborhood has power and you don't, please call (904) 665-6000 so JEA can help you determine the cause of your continued outage. To help us better assist you:

**CHECK YOUR CIRCUIT BREAKER:**  
Have any switches been tripped? Note: If your home has any storm-related flooding, address this issue first before attempting to assess any home electrical problems.

**MAKE A VISUAL INSPECTION OF THE OUTSIDE OF YOUR HOME:**  
Is there any visible damage to your weatherhead – the place where electric wires attach to your home? Are there any wires dangling on the ground that should be connected to your home? If so, stay clear and call (904) 665-6000 to report it.

**IF THERE IS DAMAGE INSIDE AFTER RESTORATION:**  
Enter cautiously and look for signs of flooding or other damage. Stay clear of any downed power lines and report them to (904) 665-6000.

**POWER UP GRADUALLY:**  
Turn on your appliances one at a time to prevent power surges.

# Disaster Preparedness

# Gainesville Regional Utilities

## STORM CENTRAL GUIDE

IMPORTANT INFORMATION ABOUT YOUR UTILITIES BEFORE, DURING AND AFTER A SEVERE STORM

STORM SEASON IS JUNE 1 TO NOVEMBER 30.

BEFORE THE STORM

**PREPARE**

- Maintain trees that may threaten your home's electric lines.
- Make plans to evacuate before a major storm if you need medically essential electric service.
- Contact Alachua County Emergency Management at (352) 264-6500 for special needs evacuation information. Special needs forms must be filed prior to an approaching storm.
- If a state-wide evacuation occurs, make sure to fill your gas tank.

**IMMEDIATELY BEFORE**

- Turn off or disconnect all outside electric appliances.
- Leave gas service turned on at the meter.

Store an adequate supply of drinking water and non-perishable food for your family. Refill water containers with GRU water!

If evacuating, turn off main breaker in circuit breaker panel. Don't remove your electric meter or turn off your gas meter.

Pets may not be allowed in public shelters, so bring them to an evacuation shelter designated for animals.

**PORTABLE GENERATOR SAFETY**

- Place your generator outside of your house, away from the eaves in a well-ventilated area to avoid carbon monoxide poisoning.
- Before using a portable electric generator, read the operating instructions carefully.
- Appliances should be plugged directly into a generator, using properly rated/used extension cords if necessary.
- Review generator safety.** Hooking up the generator directly to your household electric system is extremely dangerous.

**MEES PROGRAM**

- If you are enrolled in the MEES program, go to a shelter as soon as possible.

## STORM CENTRAL GUIDE

IMPORTANT INFORMATION ABOUT YOUR UTILITIES BEFORE, DURING AND AFTER A SEVERE STORM

STORM SEASON IS JUNE 1 TO NOVEMBER 30.

**DURING THE STORM**

If your electric, water or natural gas equipment is damaged or experiences interrupted service, use the guidelines below for the best plans of action.

- If your power goes out, call us at (352) 334-2871. Do not hang up until you have provided all the requested information.
- If you smell natural gas (rotten egg smell), alert others, leave the area immediately and call 911 from outside.
- If you see a major water leak, call Water and Wastewater Service Emergencies at (352) 334-2711.
- To reduce wastewater overflow, reduce water usage during after storm.
- Visit GRU's Storm Central for up-to-date power outage maps.

**AFTER THE STORM**

Report unsafe conditions, such as downed power lines, by calling (352) 334-2871.

- Stay away from all downed wires and avoid all standing water as it may be contaminated or energized by a downed power line.
- Refer to the "Numbers to Know" section for all important numbers. Immediately report any power outages, downed wires or major water leaks.
- If you smell a gas leak, immediately call 911.
- If you are powering your home with a generator make sure it is not connected to your electric system. It could energize GRU lines.

## RESTORATION PRIORITIES

GRU works hard to provide you with reliable and safe services, and we are prepared to respond in the event our community experiences an active storm season.

After a storm, GRU's first priorities for service restoration include hospitals, law enforcement, power plants, water plants, wastewater plants, lift stations and fire stations. Our crews then work to fix problems that will benefit the most people in the shortest amount of time. When necessary, GRU will announce boil-water notices and/or public water stations through all media outlets.



For real-time storm updates follow us on Twitter @GRUStormCentral

## NUMBERS TO KNOW

Power Outages, Emergencies and Downed Power Lines  
(352) 334-2871

Water and Wastewater Service Emergencies  
(352) 334-2711

Internet Help Desk for GATOR.NET and GRU.net  
(352) 334-3000

Natural Gas Service Emergencies  
(352) 334-2550 or 911

GRU Customer Service  
(352) 334-3434

In case of an emergency, call 911

For more details, visit [gru.com/StormCentral](http://gru.com/StormCentral)



## HURRICANE SUPPLY CHECKLIST



We advise our customers to prepare for being without electricity for at least two weeks.

### Essentials

- Battery-operated radio or television
- Flashlights
- Extra batteries
- Lighters/matches

### Water

- Water for cooking and sanitation (7 gallons of water per person is recommended)

### Food

- Ice chest and bags of ice for food storage
- Two-week supply of non-perishable food that requires no refrigeration or preparation and little or no water

### First Aid Kit

- Non-prescription medications, such as aspirin
- Essential prescription medications
- Band-Aids, moles, ointments and antibacterial medications
- Insect repellent

### Important Papers

- Maps/directions to shelter locations
- Emergency telephone numbers
- Identification, such as passports, drivers licenses and Social Security cards
- Family records, such as birth, death and marriage certificates
- Insurance policies, contracts, deeds and wills
- Inventory of valuable household items, including photos and purchase receipts
- Medical immunization records

- Pet vaccination records
- Family photos

### Additional Supplies and Tools

- Baby food, diapers and formula
- Pet food and leash
- Pet medications
- Cleaning and sanitation supplies, such as bleach, soap, napkins, rags, plastic trash bags
- Disposable eating utensils
- Can opener
- Fire extinguisher
- Waterproof tarp to cover roof or windows if damaged
- Sleeping bags
- Toiletries
- Camera to document any damaged property

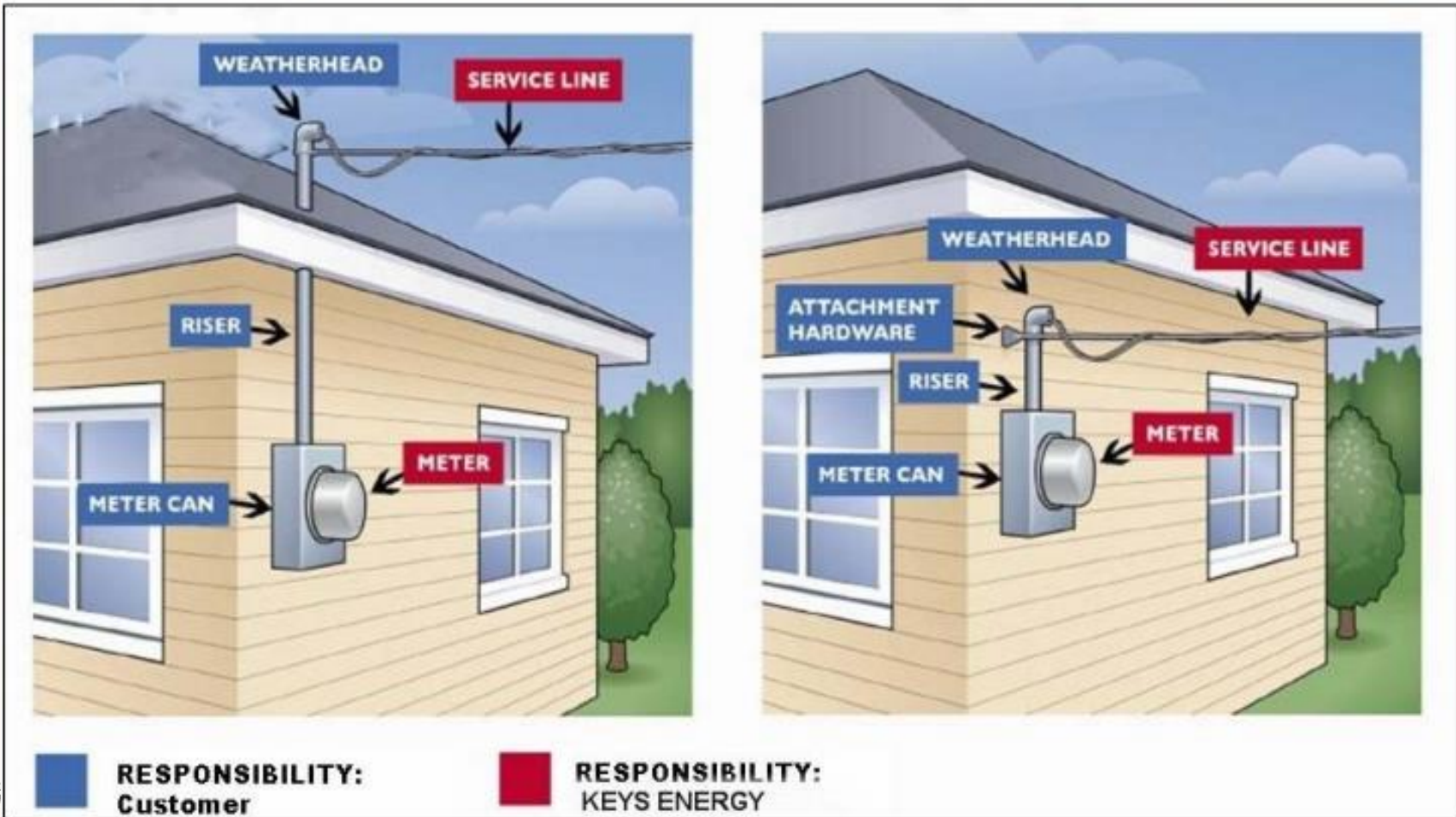
For more details, visit [gru.com/StormCentral](http://gru.com/StormCentral)







# METER CENTER RESPONSIBILITIES



# Disaster Preparedness

- We are local governments
- Work closely with all city and county departments and officials
  - In planning, preparations, and during storms
- Direct communications with local emergency management personnel and local emergency operations centers

## Work Closely with Local Leaders





# Hurricane Michael





# Hurricane **Michael**

## Public Power Impacts

- 400,000 Customers out region wide
  - 122,000 from public power
- **Tallahassee (122,000 customers):**
  - 114,000 customers without power
- Blountstown (1,300 customers),  
Chattahoochee (1,100 customers),  
Quincy (4,700 customers),  
Havana (1,300 customers):
  - All 100% without power
  - Transmission out
  - Significant damage





# Hurricane **Michael**

- More than 600 public power personnel from 16 states and more than 80 utilities
  - **Tallahassee: 430 Mutual aid**
  - **Havana: 21 Mutual aid**
  - **Chattahoochee: 88 Mutual aid**
  - **Quincy: 124 Mutual aid**
  - **Blountstown: 60 Mutual aid**

# Mutual Aid Assistance



Alabama	Kentucky	Nebraska
Arkansas	Louisiana	Ohio
Connecticut	Massachusetts	Oklahoma
Florida	Mississippi	Rhode Island
Indiana	Missouri	Tennessee
		Texas

# Hurricane **Michael**

- Tallahassee:
  - 90% restored in 4 days
  - 98% restored in 6 days
  - 100% restored in 9 days
- **Havana:**
  - Transmission out for 3 days; 100% restored in 4 days
- Quincy and Chattahoochee:
  - Transmission out for 3 days; 100% restored in 12 days
- **Blountstown:**
  - Transmission out for 7 days; 100% restored in 12 days

# Public Power Restoration





# Hurricane Michael

# Quincy Social Media

**City of Quincy Electric**  
October 17 at 10:58 AM

We know a lot of you have questions about which areas have their power restored and where the crews are working, so we thought we'd share this map with you. It's not very high-tech, but hopefully you'll find it useful.

The green highlights are main feeder lines that have been restored. The pink highlights are residential areas that have been restored. The blue stickers are the areas where the crews from out-of-town are working right now.

Please remember this is a snapshot in time and the crews will be working and more areas will be restored throughout the day.

We currently have 110 lineworkers from 11 different utilities in Quincy. Our own crews work around the clock to restore power.



37 Views  
Like Comment Share

**City of Quincy Electric**  
October 18 at 11:45 AM

We've made significant progress by energizing more than 90% of the main backbone circuits (highlighted in green on the map).

As of this morning, 42% of customers have been restored.

Like yesterday, the green highlights on the map are the main circuits that have been restored. The pink highlights are residential areas that have been restored. The blue stickers are the areas where the crews from out-of-town are working right now. Please remember this is a snapshot in time and...

See More



17 Comments 5 Shares  
Like Comment Share

**City of Quincy Electric**  
October 19 at 9:19 AM

We're back at work this morning at more than 62% restored. Here is an updated restoration map.

As before, the green highlights on the map are the main circuits that have been restored. The pink highlights are residential areas that have been restored. The blue stickers are the areas where the crews from out-of-town are working right now. Please remember this is a snapshot in time and the crews will be moving as they work and more areas will be restored throughout the day.

See More



2 Comments 6 Shares  
Like Comment Share

**City of Quincy Electric**  
October 20 at 11:09 AM

Lineworkers and other crews are back out today working to restore power to our community. We have a large number of lineworkers helping. They are working areas where the largest number of customers are affected. Once those jobs are complete, they will move to areas with smaller number of outages.

We have not forgotten anyone, and we won't stop until 100% are back online. As of last night, 87% of Quincy electric customers had power.

Here is an updated restoration map. The green... See More



3 Comments 5 Shares  
Like Comment Share



# Hurricane Michael


# Mutual Aid Social Media

You Retweeted

**Beaches Energy** @BeachesEnergy · Oct 18  
Our linemen have been working hard to help restore power for residents of Quincy, FL. #HurricaneMichael.



**Keys Energy Services** @KeysEnergy · Oct 17  
Up in the air...it's a bird...it's a plane...it's actually a Lineman! We see you Billy. #ConchCavalry #MutualAid #FLPublicPower #PublicPower #HurricaneMichael



You Retweeted

**Orlando Utilities** @OUCreliableone · Oct 19  
16 OUC electric line technicians continue to work in Chatahoochee, FL today helping restore power to the area following #HurricaneMichael. These crews will continue to work diligently throughout the weekend. #FLpublicpower #publicpower #OUCproud



**Kissimmee Utility** @KUAdirect · Oct 14  
We've received so many wonderful notes and comments from #Tallahassee residents expressing their appreciation for our visiting utility crews helping to restore power in their community following #HurricaneMichael. #publicpower #michael #MichaelTLH #mutualaid #ThankALineman

**Lincoln Electric Sys** @LESupdates · Oct 17  
MUTUAL AID UPDATE: Our guys are coming home! @LESupdates crews have been released from #Florida, & making the long trek back. @COTNews announced they reached 99-percent restoration & restored power to more than 110,000 neighbors & businesses. #PublicPower #MichaelTLH

"I want to thank you all for efforts for getting our neighborhood back on the for going the extra mile to husband get some of the (a.k.a. Godzilla) out of our Wahalaw Nene!! He had b on that tree for 3 days with You guys are the tops! Ma you!!"

~ Julie Pow

**Belmont Light** @belmontlight · Oct 16  
Crews from Belmont Light and @HolyokeCity work Tallahassee, FL following #HurricaneMichael. Mutual connections and prove what it means to be #Comm @NEPPA\_Littieton @COTNews #PublicPower




1011 NOW, Channel 8 KLKN-TV, JournalStar Neb news and 6 c

9 10 79

**Huntsville Utilities** @HSVUtilities · Oct 17  
HURRICANE MICHAEL UPDATE! Our crews in Florida continue their work in Chattahoochee, where they report 1,500 utility poles down or damaged. #publicpower #thankalineman





# Disaster Preparedness

- Communications is critical
  - Communicate often
  - Factual and realistic
- Pre-planning mutual aid is critical
- Mutual aid agreements in place before storms
- Consider mutual aid of different kinds
  - Assessors, engineers, social media, documenters

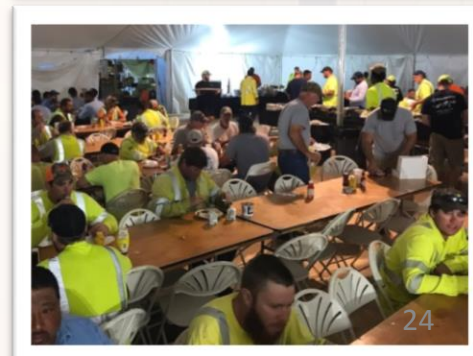
## Lessons Learned/ Best Practices



# Disaster Preparedness

- Preparations are key!
- Review your internal procedures
  - Logistics – food, laundry, accommodations
- Conduct exercises
- Work with County EOC
  - Review priority restoration lists
- Prepare for worst case scenario!

## Lessons Learned/ Best Practices





## Contact Information:

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