

# Florida Public Service Commission 2011 Hurricane Season Preparation Briefing

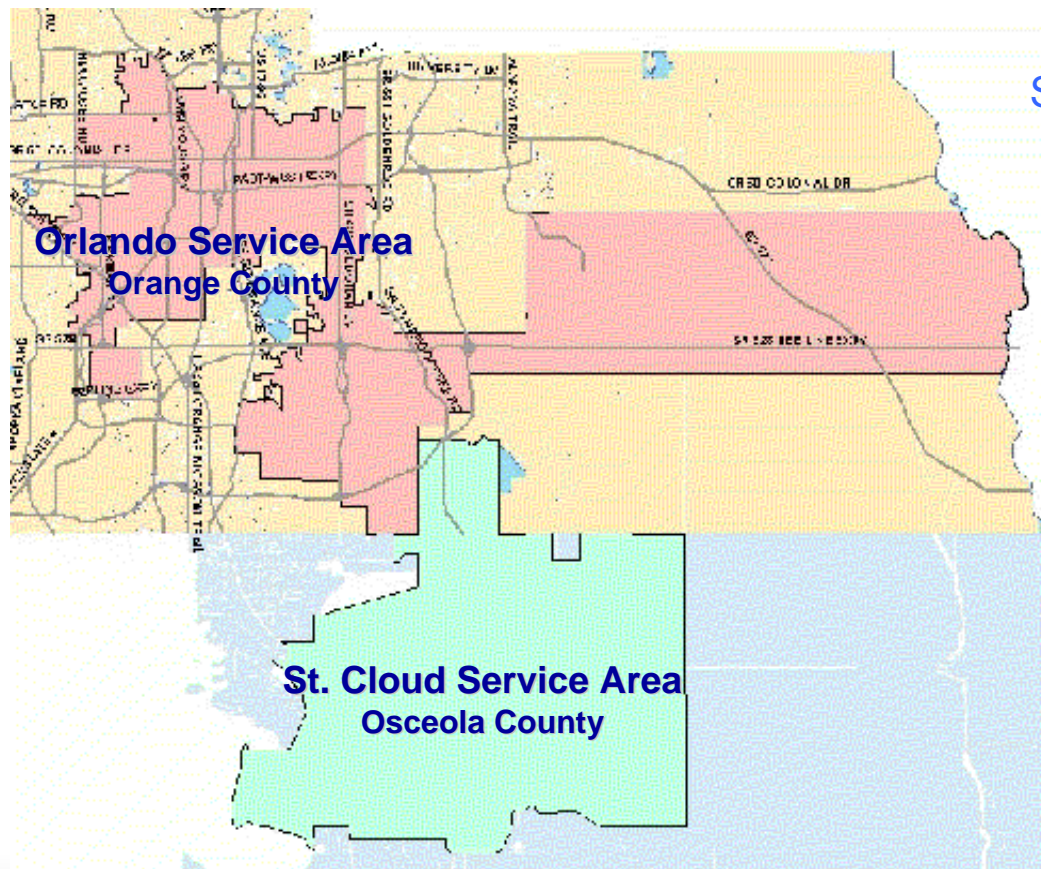
OUC—The *Reliable One*  
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# Florida Municipal Electric Utilities



# OUC Electric System



## OUC System Statistics

Service Area = 394 Square Miles

Electric Customers = 235,559

222,512 Residential

13,047 Commercial

Water Customers = 91,704

83,985 Residential

7,719 Commercial

# OUC Electric Distribution System

## Overhead vs. Underground Statistics

Overhead Pole Miles	1,358 (40%)
Wood poles = 77%    Concrete poles = 23%	
Underground Conduit Miles	1,939 (60%)
<hr/>	
<b>Total Miles</b>	<b>3,297</b>

# OUC Electric Transmission System

## Statistics

Total 69 kV Transmission Miles	48
Total 115 kV Transmission Miles	276
Total 230 kV Transmission Miles	70
<b>Total Transmission Miles</b>	<b>394</b>

Wood poles = 15%

Steel or Concrete poles = 85%

**Substations** **36**

Distribution Feeders = 269

# OUC System Design & Hardening Standard Construction Standards



- 80% of new distribution construction is underground
- Transmission and Distribution facilities are constructed to NESC 120 mph extreme wind loading standards (NESC 140 mph extreme wind loading at the coast)
- Ensure “foreign” utility attachments meet OUC design and wind loading standards
- Loop Design distribution underground circuits
- Redundant circuits to key critical customers with automatic transfer scheme
- All new and replacement transmission poles are steel or concrete

# OUC Reliability-Centered Maintenance Program

## Vegetation Management

- Davey Tree – 10 crews
- Four-year Distribution System trimming cycle
  - 1,296 Miles of overhead Distribution Lines
  - Trim 324 Miles per year
- Annually inspect trees on main feeders for fast growers
- Three-year Rural and One-year Urban Transmission System trimming cycle
  - 362 Miles of overhead Transmission Lines
  - Trim 100 Miles per year



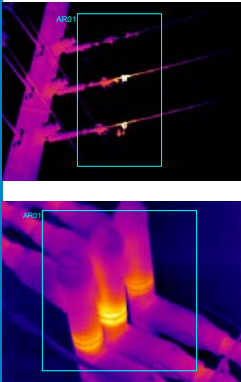
# OUC Reliability-Centered Maintenance Program

## Facilities Maintenance

### (Distribution and Transmission)

- Four Inspectors (Vegetation, Pole inspection, Pole electrical hardware)
- Five Distribution Maintenance Crews
- Two Transmission Maintenance Crews
- Inspect wood poles based on an eight-year cycle
- Annual visual and infrared inspection of all main feeders

*Preventive and Predictive Maintenance*



**Overhead**

- Visually & Infrared Inspect all main feeders annually

**Underground**

- Infrared manholes and devices of commercial areas on predetermined cycle



# OUC Reliability-Centered Maintenance Program

## Facilities Maintenance (Distribution and Transmission)

- Produces an average of 1,471 Distribution system work orders per year
- Produces an average of 60 Transmission system work orders per year

	<u>Identified</u>	<u>Work Orders Complete</u>
Pole Replacement	654	585
Lightning Arresters	298	298
Primary Connections	60	60
Primary Insulators	50	50
Secondary	108	108
Primary Static	21	21
600A Primary Switches	33	33
Primary Insulating T- Bracket	65	65
Cross Arm	124	124
Transformer	100	100
<b>Totals</b>	<b>1,471</b>	<b>1,444</b>

*Typical Overhead Distribution  
Inspection Results*

# OUC Reliability Performance

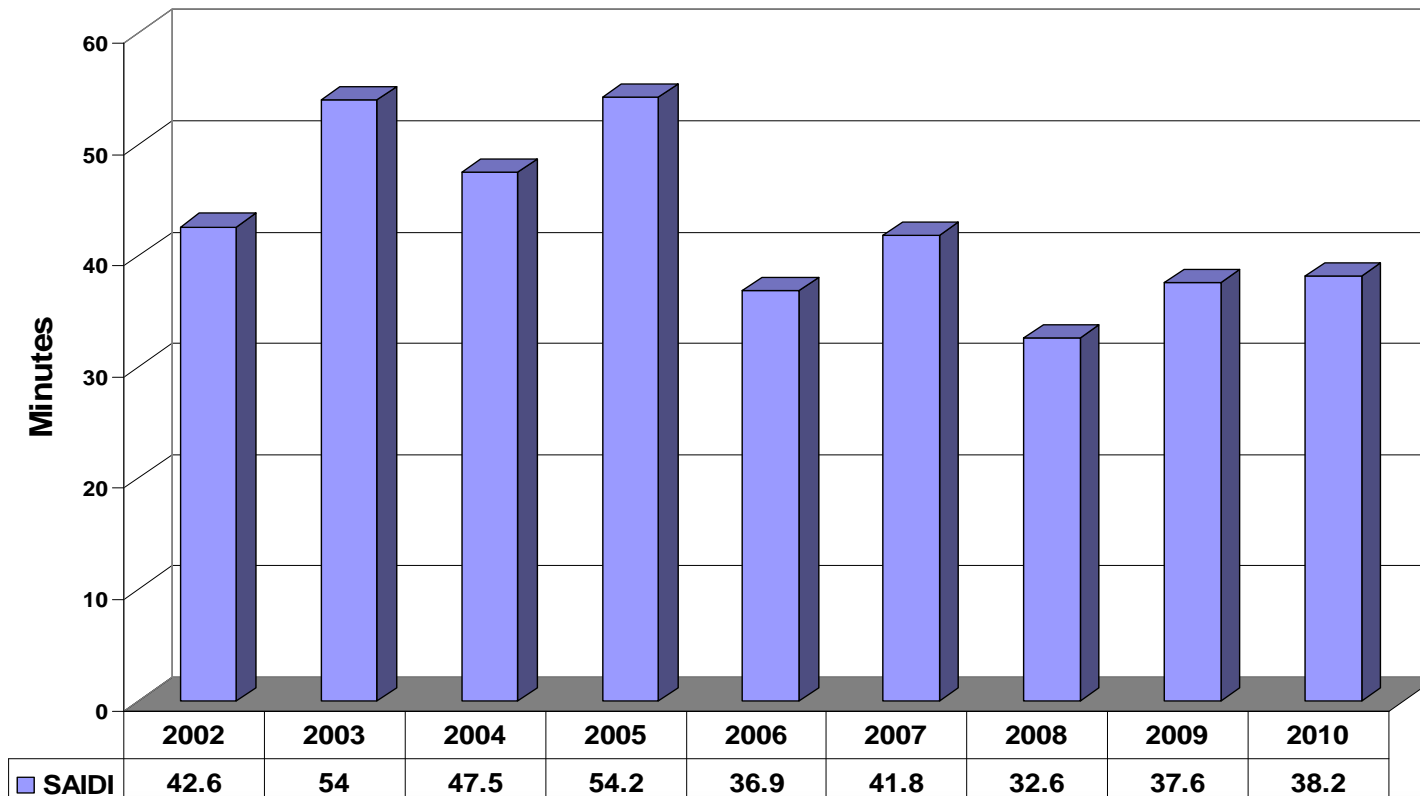
## Tracking Performance



- Daily outage reports via email to the CEO, Vice Presidents, Key Customer Accounts Representatives and Media Relations – 7 a.m., 2 p.m. and 10 p.m.
- Instant notification via email to the CEO and Operations Vice Presidents for circuit feeders lockouts and power plants unscheduled outages
- Outage Map on OUC Website ([www.ouc.com](http://www.ouc.com))
- Track Performance using Florida Public Service Commission Reliability Index

# OUC Reliability Performance Trending

**SAIDI 9-Year Average = 43 Minutes**



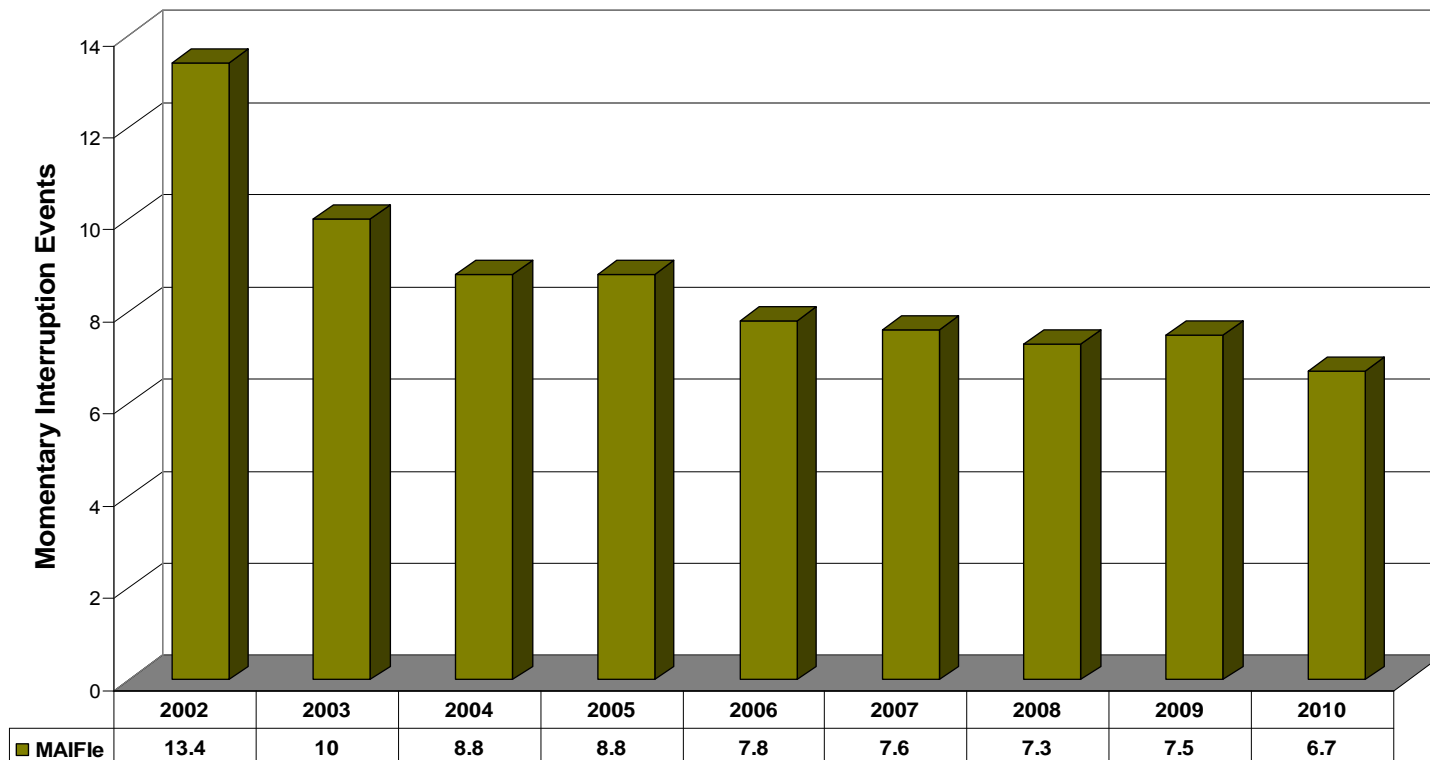
System Average Interruption Duration Index

$$\text{SAIDI} = \frac{\text{Sum of all customer minutes interrupted}}{\text{Total number of customers served}}$$



# OUC Reliability Performance Trending

**MAIFle 9-Year Average = 8.6 Events**



**Momentary Average Interruption Frequency Index - Event**

$$\text{MAIFle} = \frac{\text{Sum of all customer momentary interruption events}}{\text{Total number of customers served}}$$



# Storm Preparation

## Emergency Operations

- Adopted the National Incident Management System (NIMS)
- Operates under Incident Command System (ICS)
- Constructed a new Incident Command Center
- Established liaisons at Cities and Counties Emergency Operations Center (EOC)
- Purchased Logistics Tracking software – “Resources on Demand”
- Installed new 800 MHz Radio System
- Updated Integrated Voice Response (IVR) System



# Storm Preparation

## Emergency Operation Plan

- Annual review of Emergency Operation Response Procedures
- Procedures are updated as needed
- Employee storm assignments reviewed annually
- Training/Refresher classes conducted annually
- Critical customer list reviewed and updated
- Annual Hurricane tabletop exercises
- Due to the critical nature of the electric and water facilities, OUC will be holding terrorist tabletop exercises with the Orlando and Orange County EOC's
- Plan established to walk neighborhoods, if necessary (ex. damaged weatherhead)

# Storm Preparation

- Mutual Aid Agreements reviewed annually
  - Florida Municipal Electric Association
    - Florida Municipal Utilities
  - American Public Power Association
    - National Municipal Utilities
  - Florida Electric Coordinating Group
    - Florida Municipal, IOU and Cooperative Utilities
- Contracts are established or renewed annually with Electrical and Tree Trimming Contractors
  - Terms and pricing are settled prior to Hurricane season
- Annual review of potential equipment and material vendors
  - Terms and pricing are settled prior to Hurricane season
- Contracts established with local radio and television stations for before, during and after the storm “customer communication”
- Community storm preparation meetings

# Questions