Ameren Missouri
Energy Delivery Update
November 1st 2017
Overview

• Introduction

• Safety

• Storms
  – Monitoring and Preparation
  – Assessment and Plan development
  – Recovery and Communication

• Questions
Safety

• Strengths
  - Coworker to Coworker (c2c) communications – Increasing peer-to-peer c2c
  - Safety mindset across all co-workers
  - Positive culture; employees believe we care, believe leaders mean what they say

• Improvement Opportunities
  - Driving and equipment operation
  - Preventing slips, trips and falls
  - Preventing soft tissue injuries

• Unique / Specific Events
  - Safety recharge
  - Smith system driving – ride checks to reinforce the five keys
  - New employee safety training
Major Storm Response
Monitoring and Preparation

- Storm response plans in place
- Monitor weather conditions
  - Quantum Weather
- Resource readiness ahead of the storm
  - Crew staging and standby
  - Material Trailers
  - Mobile Command Center
- Distribution Control Offices
  - Increase staff prior to severe storm
  - Assess risk of ongoing maintenance outages
Assessment and Plan Development

• Initial Considerations
  - Location and extent of damage
  - Customers affected
  - Number of orders involved
  - High level resource needs and availability
  - Material requirements

• Plan Development
  - Complete damage assessment and develop overall plan
  - Restore customers via switching if possible
  - Restore critical customers
  - Restore backbones (single facilities serving higher number of customers)
  - Restore single outages
Recovery

- **Emergency Operating Center**
  - Overall storm response management
  - Coordinate significant resource movement and communications

- **Internal Resources**
  - Movement and utilization of Ameren Missouri resources
  - On-site contractors

- **External resources are secured via Regional Mutual Assistance Groups.**
  - Coordinated resource sharing among utilities across the region and the country
  - Extent of damage and travel time are important considerations
  - Standing contracts are in place with multiple regional and national line contractors
Communications and Customer Expectations

- **Customer Communications:**
  - Ameren.com Outage Center
  - Social Media
  - Broadcast Media
  - Text Alerts

- Increasing Customer expectations for faster response and more real time information

- **Key External Stakeholders**
  - PSC
  - State Emergency Management Agencies
  - County, City, and Municipal Leaders
  - Key Accounts - Including critical care facilities

- **Internal Communications**
  - Action plans
  - Operational updates
  - Status updates to the organization
Ameren Missouri Storm Experience – last 12 months

- 10 declared Major Storms
- 380 hours of storm restoration work
- 7 full activations of the Emergency Operating Center
- Approximately 25,200 customers outages at peak in each event (68,035 out max on 5/19/17)
- Average 630 total resources (350 Line, 110 Veg mgmt., 40 DA, 130 Other) per event
- Total expenditure of $22m, (76% Capital, 24% O&M)