Business Continuity in the Brink of Disaster

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Jackson Energy Authority

Overview

- Electric, Gas, Water, Wastewater & Telecommunications
- 630 miles of line
- 34,200 Electric customers
- 380 MW System Peak
- 34 Electric Crew members out of 375 total employees
Natural Disasters in Jackson

- 1999 – F3 & F4 Tornadoes
- 2002 – F2 Tornado
- 2003 – F2 & F4 Tornadoes
- 2008 – F3 Tornado
- 2010 – May Flood
- 2011 – April 19 Storm
- 2011 – April 25 Storm
Tornadoes Strike May 4, 2003

- **Sunday, 11:38 p.m.**, two tornadoes ripped through the heart of Jackson, TN
  - 28,000 JEA customers lost power
    - Jackson-Madison County General Hospital and other health care facilities were without service
    - Water pressure throughout system began to drop
    - Gas system experienced 75 damaged service lines
    - Wastewater system suffered damage to collection system
The Path...
The Destruction...
The Control Center...

- JEA’s underground control center, built to withstand tornadoes and other natural disasters, survived the storm undamaged.

- Critical JEA computer and phone systems housed in the control center remained fully operational.

- Emergency operations were coordinated from this building.
The Response...

- Within less than one-half hour of the storm, implementation of the Jackson Energy Authority Emergency Response Plan began.
- Employees and crews mobilized to assess damage and begin verifying facilities still in service.
The Calls…

- Within 5 minutes Customer Service began receiving thousands of calls related to the tornadoes.
- 20,701 calls were answered in eight days.
- JEA normally receives an average of 18,000 calls per month.
Distribution...
Engineering & Operations...
Administration...
Storeroom...
Field Services...
The Damage to Systems...

- **Electric**
  - 16 miles of transmission lines affected
    - 80 transmission poles changed out and 5 miles of transmission conductor installed
    - Total estimated transmission system cost - $3.2 million
  - 31 miles of distribution lines affected
    - 525 distribution poles changed out and 104 miles of distribution conductor installed
    - Total estimated distribution system cost - $5.0 million
  - 19 miles of service line installed
The Damage to Systems...
The Damage to Systems...

- **Gas**
  - Multiple service lines ruptured

- **Water**
  - Both water plants disabled
  - Inability to produce or pump water
The Restoration-Contractors...

- Total man-hours worked by JEA and contract employees during restoration were 105,000
  - Pike Electric
    - 112 crew members
    - 67 pieces of equipment
    - $1.35 million estimated cost
  - Red Simpson Inc.
    - 82 crew members
    - 50 pieces of equipment
    - $1.0 million estimated cost
The Restoration...

- JEA employees coordinated challenge of managing both contract and JEA employees needs including:
  - Housing
  - Distributing meals (over 2000 meals per day)
  - Supplying trucks
  - Fixing flat tires
  - Maintaining gasoline tanks
  - Working out of damaged facilities
System Restored

- Restoration to all customers capable of receiving service was completed on Sunday, May 18.
Keys to Business Continuity

- **Emergency Response Plan in place**
  - Continuously updated and refined
  - Reviewed annually with supervisory staff
  - Flexible

- **Control Center remained operational**
  - Average time before answer of 7 seconds, only 5% lost calls
  - Availability of maps and records (GIS, SCADA, CIS)
  - Communication hub for response

- **Organizational flexibility**
  - Plan detailed non-traditional roles for all employees
  - Gas & Water crews provided additional manpower to Electric crews
Keys to Business Continuity

- **Focused attack**
  - Water Plants and Hospitals
  - Substation restoration
  - Major feeders

- **Maximized resources**
  - Concentrated re-construction efforts from dawn to dusk
  - 24-hour coverage by management using two shifts
  - Daily meetings on work to be done – pre-dawn & post dusk
  - Visible to the crews and staff
Keys to Business Continuity

- Kept customers informed
  - Initial hourly contact with the press
  - Daily press conferences
  - Map distributed showing timeline of power restoration

- Coordinated with city/county Emergency Operations Center

- Provided customer service reps with accurate and up-to-date information

- Helped in the community’s response
Jackson Energy Authority
One thing you can count on.