"All Hands on Deck" – Emergency Second Roles for Utility Employees

Discussion document

Presented at the
EEI TD&M Conference

Boston
October 8, 2007

Agenda

- ■ The Problem and the Opportunity

- ■ Issues and best practices

- ■ Observations and Key Questions

Illustrative

Number of outages in one area per shift per day

- 27 days with 6 or more outages
- Staffing: Enough to handle as much as 5-7 outages per shift per day in this area
- Average: 2 outages / shift / day
- 70 days with no outages

Outages (y-axis, 0 to 14)

Days other than official 'storm' days (x-axis, 1 to 352)
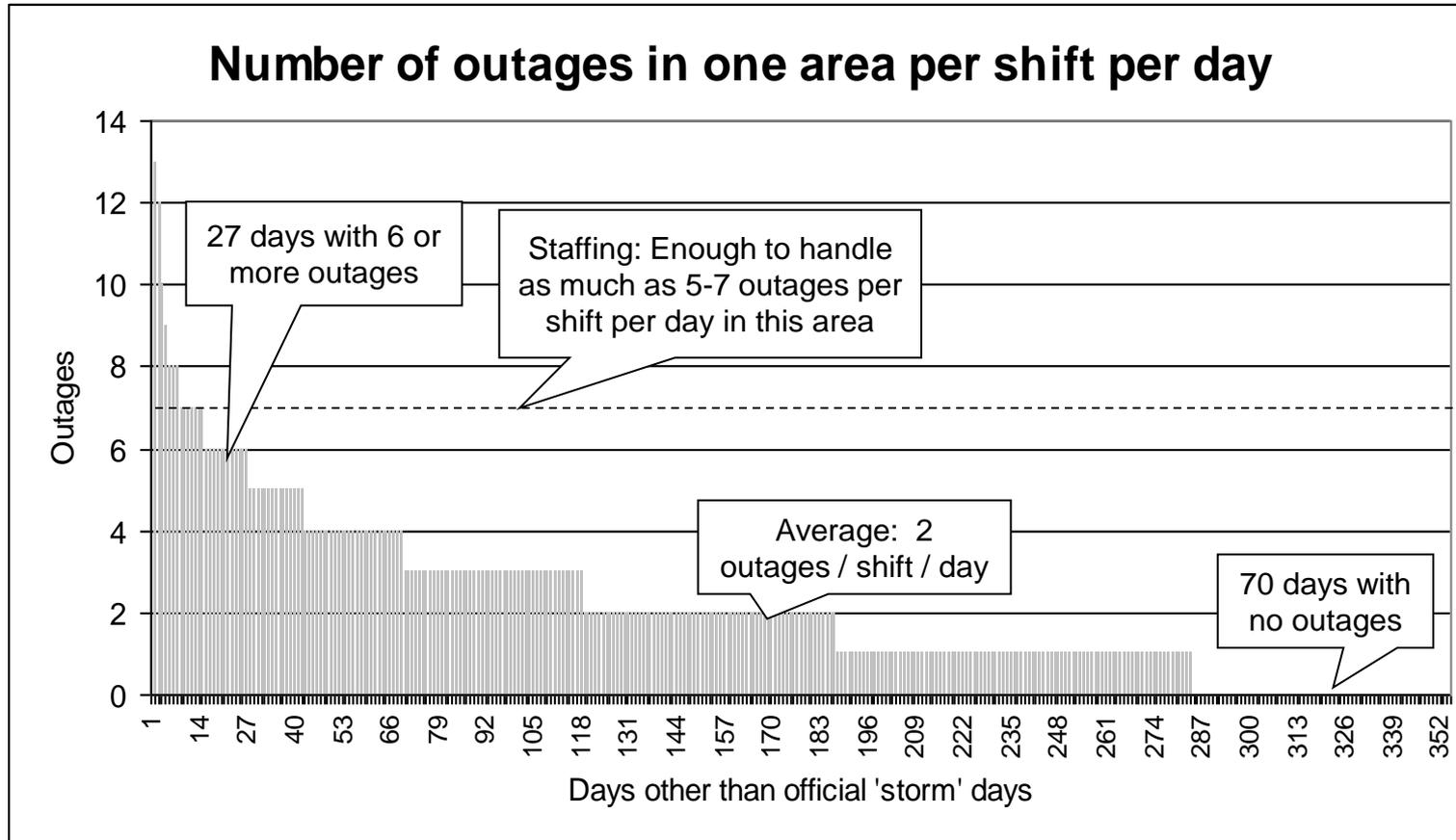
The distribution of days of outage restoration workload is very skewed, with typically about 300-340 days per year of 'normal' activity

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But in major emergencies, more resources are needed…

Resources	Level 1	Level 2	Level 3	Level 4
Troubleshooters	100	150	300	500
Line crews	200	300	600	1000
Ladder crews	133	200	400	650
Tree crews	67	100	200	350
Wire watchers	80	120	240	400
Damage assessors	67	100	200	350
Logistics runners	6	10	15	20
Case analyzers	3	5	10	15
Extra call takers	33	50	100	175
On-site customer care	-	3	5	10
Public communicators	1	5	10	15
Employee assistance	-	1	5	10

No utility can expect to staff up year-round with enough regular-job employees to meet the need in major emergencies

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So, when emergencies hit, it's 'all hands on deck'

Illustrative

Normal role	Emergency second role (with proper training)
Troubleshooters, line crews, ladder crews	Same as normal role
Meter, gas techs	Ladder crews
Engineering techs	Damage assessors, wire watchers, case analyzers
Administrative personnel	Logistics runners, employee assistance
Customer care, marketing	On-site customer care, public communications
Executives, managers, supervisors	Incident command structure group leaders
Key non-T&D personnel (plant operators, etc.)	Same as normal role

Some employees will need to 'switch hats' in an emergency

Each employee should know his/her role in an emergency. For many, it will be their normal role. For others, they will have 'second roles'

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Effective major event restoration requires multiple process skills

Mobilization	Workflow	Communication
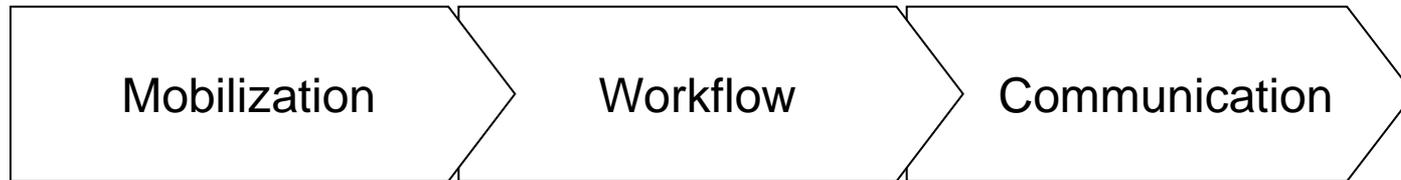
Mobilization
- ICS Activation
- Predicting/assessing storm damage
- Predicting/tracking resources needed
- Mutual assistance
- Logistical support
- De-mobilization

Workflow
- Trouble analysis
- Trouble dispatch
- Wire watch
- Damage assessment
- Partial restoration
- Tree work for access
- Repair dispatch
- Permanent repair

Communication
- <u>Customers</u> via call center, IVR, media, website, pre-mailings, outreach vans
- <u>Governments/regulators</u> via key contacts, calls, briefings, drills
- <u>Media</u> commentators via pre-meetings, photo ops, ready copy, ads, website

Effective restoration is not just about line crews. It involves the best efforts of a wide variety of company resources, including 'second roles'

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There are four key steps to establishing emergency second roles

Identify needs	Assess employees	Assign roles	Train and communicate

Identify needs
- Identify needed resources – by type of event
- Identify minimum skills, training, and certification
- Identify needed tools – software, pagers, etc.

Assess employees
- Identify each employee's skills for a variety of second roles
- Create database
- Communicate with employees about their roles to see if they would be up to it

Assign roles
- Match and balance skills and needs
- Identify gaps in training, etc.
- Assign roles to each employee, even if they are the same as their normal roles

Train and communicate
- Develop training modules if new ones are needed
- Schedule all required training
- Document when training is done.
- Update status as people leave, are restricted in duty, etc.

Being prepared for a major emergency is no accident. It requires months of planning, coordinating, training and communicating

Best practices* in emergency second role highlight planning

- Readiness assessment index
  - Like military unit readiness, a checklist-based tool
- Different events might require different second roles
  - Pandemic not the same as major storm
- First responder database/paging system
  - Employee home/work location matched to substations
  - Eyes and ears on site helps greatly; sometimes hands, too
- Exempt personnel may have 'strike duty' roles and training
  - Others may have previous experience needing updating
- Retirees can be a source of experienced skills
  - Include them in a database, and assign a coordinator
- Include evacuation plans and assistance
  - In Katrina-like emergencies, employees can help families of those who are needed to work 16-hour shifts
- Consider assigning teams by location, e.g., substation
 - Drills can help them come together as an effective team

It's all about teamwork – everyone can help

Although every company has emergency second role programs, innovators have found ways to make them more effective

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New technology and tools address the need for second role planning

- Special applications in existing OMS, GIS, WMS systems

  - Many homegrown applications have been written as modifications or applications in standard software

- Macrosoft – Resources on Demand ™

  - Software for managing resource requests, tracking personnel movements, and supporting logistics during a large-scale restoration event

- Avineon – Avineonics™ Integrated Collaborative Systems

  - Software for NIMS/ICS planning includes second role database and integrated mapping/planning

- O'Neill Management Consulting – Storm Model

  - Consulting leading to spreadsheet-based tool that converts weather forecasts into outage/damage predictions and resource requirements for crews and second role-type resources as well
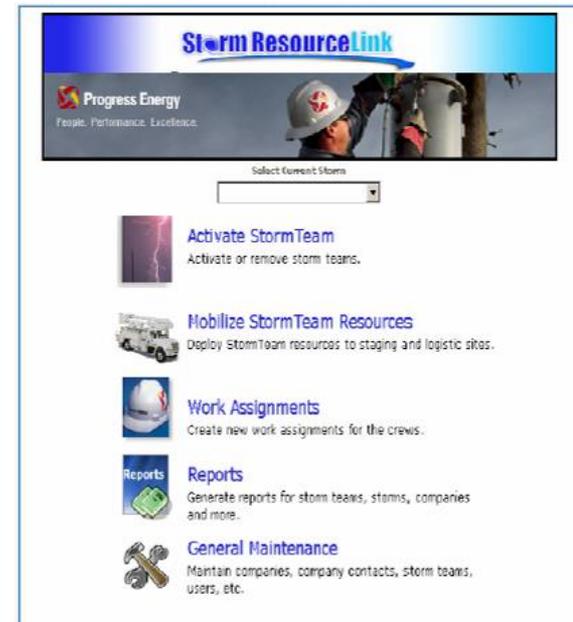
Internal application by Progress Energy presented at Infocast Conference on Emergency Preparedness and Service Restoration for Utilities, Atlanta, 2006

As the industry continues to focus on improving utility response to storms and emergencies, vendors continue to offer new solutions

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Observations and Key Questions

Observations

- All utilities have some type of emergency second role program, but there is a wide disparity in the <u>degree</u> of participation, training, and communication about those roles

- There are some <u>best practices</u> and methods that innovators have adopted and others might emulate as appropriate

- <u>Regulators</u> and independent <u>auditors</u> are beginning to notice and ask questions about emergency second role programs

Key Questions

- Are your people really <u>ready</u> for the next major emergency?

- Does everyone <u>know</u> their emergency second role?

- Have they been <u>trained</u> and <u>equipped</u> to fulfill that role?

- Would your organization pass an <u>audit</u> of preparedness?

  - Now, <u>before</u> the emergency, or

  - Afterwards, in the light of public <u>scrutiny</u>?

Questions?

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When the emergency hits, it will be <u>too late</u> to identify, assess, assign, and train employees for emergency second roles. <u>Now</u> is the time.

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