Emergency Preparedness Is Key To Maintaining Community Continuity

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Local newspapers all over America are running headlines these days that cite their power companies' performance in emergencies. From heat waves to ice storms, blackouts, hurricanes, floods, wildfires, and even just severe thunderstorms, there seems to be no shortage of causes for emergencies (to say nothing of what may yet come - avian flu epidemic or another terrorist attack). If utilities don't want to make the wrong kind of headlines, they need to be prepared to deal with community emergencies.

And today, the stakes are higher than ever. Our increasing dependence on electricity to keep us safe and able to do business has transcended the convenience of electric lights, appliances, and entertainment. Today, when the power goes out, communities stop. And while many people might welcome a brief enforced holiday, more and more people rely on continuity of service for the essentials of life. Businesses have learned to hold minimum inventories with 'just-in-time' practices, and retail customers are less willing and able to use cash for transactions, even in a grocery store, so disruptions in the flow of power cause disruptions in the flow of commerce and daily life.

And the trouble does not end with unfavorable headlines. In a severe emergency, it is likely to be followed up with public post-storm audits, which have become a virtual certainty of late whenever communities are significantly disrupted. Such audits, often done by specialized third parties like James Lee Witt Associates (the firm founded by pre-Katrina FEMA director James Lee Witt), typically investigate the utility's competence in the areas that are key to success in an emergency (see Key Questions Asked When Restoration Takes Too Long). Success depends on adopting state-of-the-art practice in each area.

Key Questions Asked When Restoration Takes Too Long

1. Was there a good emergency plan in place, communicated to all concerned, with annual training and drills for key players?

2. Was there an effective organization in place, including a continuous planning process organization, e.g., the utility's emergency preparedness group, as well as an ad hoc management structure specially tuned to make proper decisions in an emergency environment, e.g., an Incident Command Structure (ICS)?

3. Was the pre-storm mobilization effective, using available weather or hazard warning data to 'pull the trigger' at the right time and with enough resources (employees, contractors, mutual assistance from other utilities, and even materials) to respond to the full brunt of the disaster quickly?

4. Was restoration handled effectively and appropriately, including damage assessment, prioritized dispatch, efficient use of resources, estimated restoration times and, if necessary, outreach to specially disadvantaged customers?

5. Did the utility communicate fully and effectively, before, during, and after the event, with pre-event warnings of possible severity, details and drills of the plan, pre-staged newspaper ads about what to do, specific event information on the website and call taker screens, accurate and timely estimated restoration times with updates for significantly revised estimates, and 'One Voice' coordination of information to customers, employees, media, regulators, and community leaders?

6. What are the key Lessons Learned from the event, and how will the utility take advantage of them to make truly effective changes that will allow it to respond better in the future?

The Emergency Plan

What makes for a really effective plan? An old military axiom says "No battle plan survives contact with the enemy". In somewhat the same vein, President Dwight Eisenhower, who as a General led the successful allied invasion of Europe at Normandy, said, "I have always found that plans are useless, but planning is indispensable". Planning gives you a stake in the ground from which to measure your deviations. When the damage assessments come, are they worse or better than you expected? Is the speed of restoration faster or slower than you had planned? Why? What needs to be fixed, now, if possible, or if not, then for the next time?

Planning allows you to learn from your mistakes, to get better with each exercise, to stand on the shoulders of those who went before, instead of treating each new event as if you were starting from scratch.

Planning also aids communication to key stakeholders. If you tell people what you normally do in a Level Three storm, and you predict a Level Three storm but get hit with a higher level, you can explain if the restoration is slower than expected or if the costs were higher because you had to pay more to get resources you didn't originally plan to use. As much as possible, you are still trying to follow the rule of 'Plan the work, work the plan' even as nature seems bent on trashing your plan from the start.

The Emergency Organization

One doesn't have to have read much of the papers in the last few years to see the importance of having a good organization structure for emergency management. Stories 'ripped from the headlines' abound of what went well and what could have been done better in emergencies as varied as the 9/11 attacks and various hurricanes. The utility industry in general has a lot to be proud of in the way that utilities plan for emergencies and provide mutual assistance to each other. Yet, with each new emergency new lessons are learned about how to handle crises better, and one of the key tools in doing so is the Incident Command Structure (ICS).

Without going into the details of ICS - the typical structure of planning, operations, finance, administration, etc., it may be useful to draw on another military analogy (especially since the ICS originally grew out of paramilitary organizations like police and fire groups). In a recent biography about John Boyd, "Boyd, The Fighter Pilot Who Changed the Art of War", author Robert Coram explains how John Boyd taught the U.S. Marines a battle strategy that, like the German Blitzkrieg philosophy, uses speed of action to destabilize the command of the enemy and to 'get inside his

decision cycle', presenting him with new information faster than he can make decisions about the old information. That was the battle strategy that the Marines under General Schwarzkopf used in the diversionary attack on Kuwait that was so successful in the first Gulf War, and remains an effective battle plan for an invasion. In civil emergencies, part of what can go wrong is that there can be a lag between events happening and the command structure's ability to make proper decisions. What ICS does is to allow an organization like a utility to make strategic decisions quickly based on integrated information, and to have those decisions carried out by an effective chain of command underneath the key decision maker.

Most utilities embraced some form of ICS years ago as a way to coordinate the responses of multiple responders - police, fire, and utility workers - to an emergency at a particular site like a forest fire or a burning building. From there it has grown into a model of how to mobilize for community-wide emergencies like major storms, earthquakes, floods, etc. In fact, the Federal government has now joined the bandwagon, encouraging and in a sense requiring communities to adopt its version of ICS, the National Incident Management System (NIMS). While this federal Johnny-come-lately guidance has not always been welcome, particularly if it means federal control over a local situation, the best response for local utilities seems to be to get out in front of the change by making sure that the utility has its own implementation of an incident command structure that is as compliant with NIMS as it needs to be, but is first and foremost a local system for responding in a coordinated way to community emergencies. And the power utility in that situation needs to make sure that its own special procedures are developed, because you can be NIMS-compliant but still not have a system that utility managers have integrated into their own processes and culture.

Mobilization

Mobilization is what makes restoration go faster. With a good plan in place and a good organization that is getting whatever information is available into the hands of the key decision makers, the next step is to 'pull the trigger' at the right time and to the right degree. Timely and appropriate mobilization can make the difference between favorable and unfavorable reactions from the public and media, because without the proper mobilization, feeders stay out for long periods (Figure 1). And until the feeders get put back, most companies will not truly know where all the outages are or how long it will take to restore all customers.

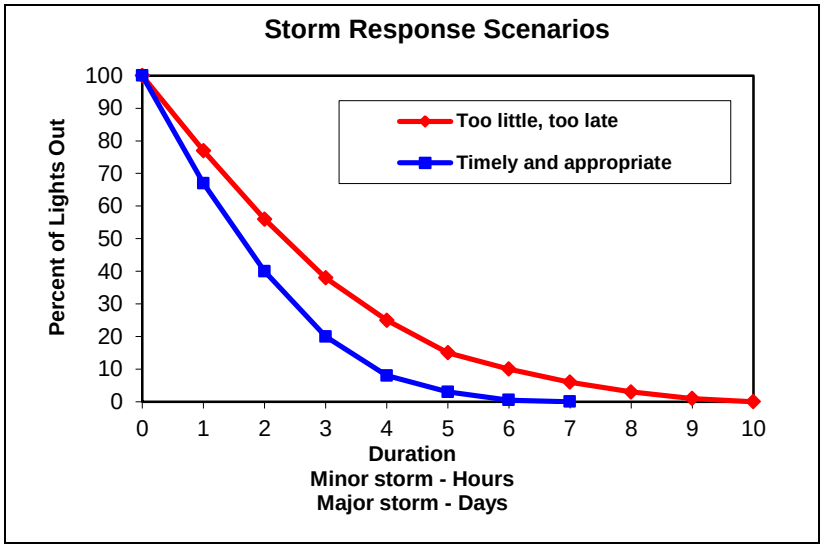

Figure 1 - Impact of Mobilization Timeliness on Restoration Duration

But good mobilization is not easy. It requires the utility to do some hard work in advance to set up its decision-making capability. Tables (or models) must be developed that show how certain weather conditions are likely to cause a certain number and type of outages, which in turn would require a certain number and type of resources in order to restore service to 50 percent, 90 percent, and finally 100 percent of customers over certain acceptable durations. Such tables are not meant to replace good judgment born of experience, but rather to act as an aid and to allow each experience to build on the previous ones, so that the process improves over time (and doesn't fall apart when that experience retires or walks out of the door).

Communication

Probably the next most important key to success is communication. Utility surveys of customer satisfaction have shown (e.g., see the Customer Care Research Consortium survey on Outage Communication) that customers will tolerate longer duration of outages if they are given timely and accurate estimates of how long the restoration will take. Some utilities, wanting to be sure the estimate is accurate, defer giving any estimate until after damage assessment has been done. But customers don't like to be left in the dark - both literally and figuratively. If their lights are out, they want to know as soon as possible when they are likely to be back on, so they can begin to make plans to go elsewhere if necessary for food, shelter or necessities. Utilities need to hone their ability to assess likely damage based on the weather that has hit them, and then be prepared to issue revised estimates if the field-based damage assessment proves to be greatly different.

Basically, utilities need to communicate early, often, widely, diversely and consistently in order to be effective in satisfying the public:

- Early - with advance notice as storms approach, and early estimates of restoration
- Often - with timely updates as significant new information becomes available
- Widely - with customers, public officials, media, institutions, groups, etc.
- Diversely - through various media to various audiences
- Consistently - with 'One Voice' to customers, employees, media, etc.

The media should include websites, because even though power may be out, some customers will have access to the internet through battery-operated computers, phones, their offices, or friends who are not interrupted, etc. Print communication should include pre-staged full-page ads in local papers instructing what to do to be safe when power is out and how to report outages. A key information medium is the company's call center and interactive voice response unit, which can be used both to field incoming outage calls but also for outgoing calls to confirm restoration or update restoration estimates.

By communicating throughout the emergency, the utility can convey a sense that it is aware of the situation and working hard to restore power.

Bottom Line

In today's environment, loss of community continuity is a threat to well-being. Emergency preparedness is the key to the kind of excellent execution that will maintain a community's confidence in its utility company.