



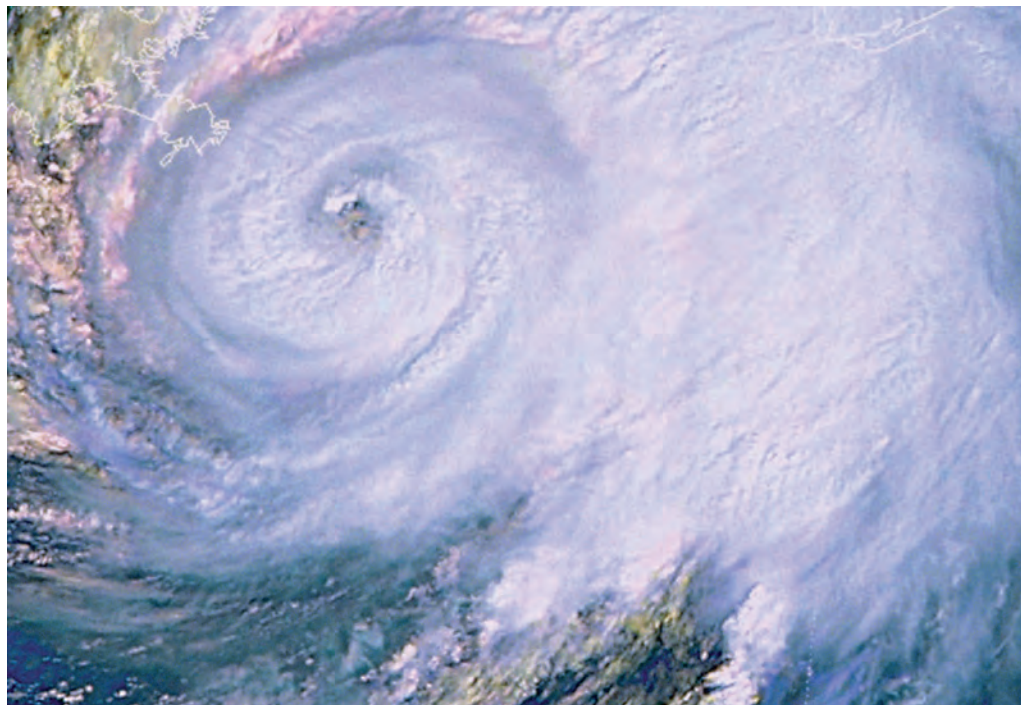
Jumpstart

JumpStart contains sparking contributions from industry analysts, business advisors, financial experts, fundraisers, and free thinkers. At the invitation of *Elektor Business Magazine* the author(s) provide key advice to start-up companies and homelabs on aspects of the trajectory from product development and funding right up to marketing and trade. In this instalment: **disaster planning**.

A Guide to Pre-crisis Planning

By **Robert Kirslis**, Data Center and Industrial Marketing Manager, Electrical Engineering Services & Systems Division, Eaton

Specific systems within a facility respond differently to power losses. After a disaster, power should be restored to the most critical services first, but the definition of “critical” changes depending on the duration of the outage. Attempting to sort out priorities such as these during the chaos that follows an event can make the decision-making process more difficult, underlining the importance of thorough and robust recovery planning.



Eaton recommends this document be used as a guide for a planning session prior to an actual emergency. With established emergency procedures, the consequences of the loss of electrical power can be minimized if a disaster occurs. Following these steps can also help train employees so they know what to do in an emergency and make emergency preparedness part of the culture of an organization. Overall, a proper pre-crisis plan should also allow your organization to identify the following:

- the steps needed to create a successful recovery;

- how to prioritize the recovery of services;
- what is required to recover these services, including facilities, IT, financial and resources;
- what to expect in the event of a disaster

The importance of pre-crisis planning

Downtime carries an enormous price tag, so it is critical to minimize interruption to your operations. However, electrical emergencies are often inevitable due to the unexpected nature of blackouts, equipment failures, hurri-

canes, lightning, floods, high winds and other natural disasters.

Every business depends on electricity, and ensuring its reliability is vital. When the power is out, the costs to a business can be immense, with losses in productivity, sales and even inventory.

The price tag varies not only by industry, but also by the scale of business operations. For a medium-sized business, the exact hourly cost may be lower, yet the impact on the business can be proportionally much larger. Nailing down the cost of each hour of downtime varies widely and is based on a number of factors, such as the nature of the business,

59% of Fortune 500 companies experience a minimum of 1.6 hours of downtime per week. Assuming an average staff of 10,000 employees who are paid an average of \$56 per hour (including benefits), the downtime loss in labor alone for a Fortune 500 firm would ring up at \$896,000 per week — or more than \$46 million annually.

Dunn & Bradstreet

Cost of downtime

Typical hourly cost of downtime by industry (in U.S. dollars)

• Brokerage service	6.48 million
• Energy	2.8 million
• Telecom	2.0 million
• Manufacturing	1.6 million
• Retail	1.1 million
• Healthcare	636,000
• Media	90,000

Sources: *Network Computing*, the *Metro Group* and *Contingency Planning Research*

Power interruptions

Among the leading global causes of business continuity insurance losses. Based on a study of nearly 2,000 business insurance claims from 68 countries between 2010 and 2014, the report estimated the average large business property claim at a staggering \$2.4 million, with blackouts ranked among the top 10 causes of such losses.

Allianz Global Corporate & Specialty



the size of the company and the criticality of its IT systems related to revenue generation.

For instance, a global financial services organization may lose millions of dollars for every hour of downtime, whereas a small firm might lose only a margin of productivity.

Some emergency plans to consider

1. Perform pre-crisis audits. A pre-crisis risk mitigation audit will help your organization estimate the potential impact of credible disaster scenarios and identify ways of minimizing vulnerability in the event of a disaster.

2. Identify sources of equipment reclamation, life extension and/or replacement with full manufacturing capabilities. Sources for equipment reclamation must be certified for the equipment that is installed. Because many facilities are older and may include electrical equipment from a variety of electrical vendors, look for sources that have the certification or other demonstrated proficiency to repair, renovate and/or renew the electrical equipment installed at your facility.

For robust crisis response, make sure your contracted support organizations have expertise in staging support equipment, including generators, replacement electrical equipment and satellite communication networks.

When searching for a qualified first-response service provider, there are a few critical capabilities to look for, including:

- proven results and performance;
- local support services with a national network and global capabilities;
- up-to-date certifications for procedures and facilities;
- adherence to original manufacturer standards and tolerances;
- familiarity with your business, industry and equipment;

3. Develop a plan for survival and support accommodations for your in-house crisis response team.

Depending on the severity of the disaster, food, water and sleeping accommodations may be in short supply; therefore, it is critical that your support teams can sustain themselves.

If you have a radio communication system, make sure it will be operable following an electrical system failure. Typically, this involves supplying power to chargers as well as repeaters.

Qualified crisis-response service providers will most often provide access to satellite communication networks to help simplify communications. Contingency plans for accommodating response staff can also be arranged.

Conclusion

In the aftermath of a crisis, it is essential for facilities to have a recovery plan in place as well as the support networks needed to ensure the facility can return to production in a rapid and safe manner. It is also important to recognize there is no one-size-fits-all template for disaster planning. However, by following the guidelines listed in *A guide to pre-crisis planning*, organizations of all sizes can better prepare themselves to minimize the impact of electrical system failures. ◀

Editor's Note.

For the benefit of start-up companies this article contains excerpts from the white paper: *A guide to pre-crisis planning* published by Eaton, USA. The complete version is available at

www.eaton.com/crisisresponse



The Author

Robert Kirslis has more than 25 years of experience in the planning, maintenance and operations of data centers, power plants and other types of facilities. Serving as the data center and industrial marketing manager at Eaton for its Electrical Engineering Services & Systems division, he helps customers advance their businesses by delivering highly effective power management solutions. Kirslis has a degree in Electrical Engineering from the Wentworth Institute of Boston, Massachusetts.