The Best Way to Plan for a Crisis?
Before it Occurs.

BY BOB KIRSLIS

Attempting to sort out priorities during the chaos that follows an event makes decision-making difficult, with fewer resources available and labor rates at a premium price. Planning for these events ahead of time will get a facility in a crisis recovery mode faster, and in a cost effective manner.

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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, hurricanes, 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: due to restoration costs and lost productivity, sales and inventory.

If you do not have an effective crisis recovery plan in place, it is nearly impossible to coordinate a streamlined response during the emergency, which can cause already substantial losses to multiply. Additionally, during a large-scale or regional crisis, all local companies with recovery plans in place will have more than likely retained the resources you may need to start the recoveries – which will result in even more downtime while trying to secure resources and paying top dollar for them.

Further, the recovery process can take be further delayed if updated critical facility information is not available, such as: up to date one lines, spare parts, equipment inventories, and system restoration priorities.

Attempting to sort out these priorities during the chaos that follows an event makes decision-making more difficult, with fewer resources available and labor rates at a premium price. Eaton recommends that planning for these events ahead of time will get a facility in a crisis recovery mode faster, and in a cost effective manner.

With pre-established emergency procedures, the consequences of the loss of electrical power can be minimized if a disaster occurs. Pre-crisis audits also provide the benefit of potentially identifying internal problems that could cause issues, including: overdutied or malfunctioning equipment, storage blocking equipment access and/or escape routes, missing breaker racking or lifting tools, missing drawings, and so on.

It is also important to make emergency preparedness part of the culture of an organization, so employees are trained and versed on how to respond.

DEVELOPING A PRE-CRISIS RESPONSE PROGRAM IN 5 STEPS

1 Consult with a qualified first-response service provider with trained and experienced personnel for the equipment you have at your facility.

Research the service providers' capabilities. Ensure they have toured your facility and have identified critical areas.

Recognizing that for widespread disasters like hurricanes, both your employees and those working at your support organizations may be affected so it is critical that the provider you select can source manpower and materials from out of the area if necessary.

Putting in place a contract with rates, fees and retainers up front puts the company in the best position for the negotiation. The company should set caps and documentation requirements in the contract to ensure there are supporting documentations or services being provided. It is also key to that all insurance and training requirements are stipulated, and the vendor and employees comply with all the required trainings before any crisis occurs.

2 Perform a pre-crisis risk mitigation audit to estimate the potential impact of credible disaster scenarios and to identify ways of minimizing vulnerability in the event of a disaster.

Critical load audits can help identify which loads require backup power. Identifying consequences of potential nature and man-made threats will allow you to evaluate all physical surroundings and financial impacts resulting from loss of equipment or regional infrastructure resources. You should also outline the consequences of electricity losses for varying durations and use this data to develop a contingency plan to deal with each consequence. In addition, conduct a safety audit and establish procedures to ensure injury-free remediation.

All documentation should be periodically updated to reflect current facility or field conditions. Extra copies of this information should also be stored off-site to ensure it is accessible no matter the extent of damage incurred.

Additionally, after evaluating assets, the company should have discussions with their insurance provider to ensure all requirements are met prior to a disaster to make reimbursement and financial support as smooth as possible.

3 Consider adding local electrical power generation or quick-connect temporary power sources for critical areas of operation.

Permanent on-site local generation comes at the highest cost but provides the highest level of assurance. Local generation can increase reliability to ensure systems are always functioning, but ensure that contracts are in place with trusted fuel providers for quick delivery.

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You can also add provisions for temporary power hookup. This can only be done by trained, certified professionals. Consider having the provisions already installed to allow the possibility of simply plugging in a backup generator

If site generation is available you may want to consider exploring ways of configuring it into an "island" or "microgrid" on an as-needed basis. This may involve adding protective devices and devices to automatically shed lower priority loads.

4 Identify sources of equipment reclamation, life extension, and/or replacement with full manufacturing capabilities.

These sources 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.

Document and save the list of equipment installed (brand, model, and serial number), one-line diagrams, device settings, and software (both vendor provided and user custom) at your facility. Update the list when you buy or change equipment or settings. It is important new staff is trained on this procedure.

Furthermore, the company should have clear roles and responsibilities as to who is responsible to keeping the data updated.

5 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 that it will be operable following an electrical system failure. Typically, this involves supplying power to chargers as well as repeaters. ∎

About the Author: Robert Kirslis has more than 25 years of experience in the planning, maintenance and operations of data centers, power plants, and all types of facilities. Serving as the data center and industrial marketing manager at Eaton for its Electrical Engineering Services and 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 and has served on the board of directors of the Boston Chapter of 7x24 Exchange.