

REBUILD SMART: RELIABILITY, RESILIENCE, RECOVERY

Executive Summary

Severe weather events seem to be happening more frequently in the United States. Historic floods, tornadoes, hurricanes, and last year's Superstorm Sandy have led to record levels of devastation and rebuilding. As we become more reliant on electricity to power our homes, businesses, industry, communications, and first responders, a more robust approach to electrical preparedness and recovery is critical to minimizing the personal and economic damage caused by these events.

To mitigate the impact of future weather events, the 400-plus members of the **National Electrical Manufacturers Association (NEMA)** and its staff of electroindustry experts have compiled recommendations in a new guide titled, **Storm Reconstruction: Rebuild Smart**.

Federal, State, and Local Policies

Minimizing the damage caused by major storms requires an electrical grid that is built to be resilient and reliable before disaster strikes. As *Storm Reconstruction: Rebuild Smart* explains, deployment of smart technologies can make America's power systems safer, more reliable and resilient, and designed in such a way that they can be restored more quickly following a disaster. NEMA supports policies that encourage investment in smarter energy technologies to better protect lives, infrastructure, and communities:

- Review current public programs to ensure technologies that are reliable, resilient, and efficient are promoted;
- Promote policies to stimulate greater public and private sector investments in smart energy technologies such as incentives for U.S. industrial sector and the use of energy saving performance contracts (ESPCs) for state, federal, and local agencies;
- Authorize all federal storm reconstruction aid to be used for deployment of technologies that mitigate future power outages;
- Encourage routine adoption of the most current electrical safety codes in all states; and
- Promote adoption of an industry standard for equipment and structures in vulnerable areas.

Risk Management Planning

Risk management planning should include deployment of smart technologies to mitigate future power outages:

- Engage experts in smart energy solutions to perform pre-crisis risk mitigation assessments;
- Create a unified emergency storm response plan to develop a cohesive blueprint for action that accounts for loss of power and damaged or fallen communication lines;
- Ensure that storm response plans are updated to utilize smart technologies for power restoration; and
- Invest in reliability testing and training for energy management systems.

Technologies and Practices

The NEMA guide contains best practices, recommendations in energy systems design, development, and technology deployment that can reduce outages, save lives, and protect property:

- Smart Grid solutions, microgrids, energy storage, and distributed generation systems;
- Alternative and backup generation technologies; and
- Advances in wiring, cabling, and components.

The guide can be found online at www.nema.org/rebuild-smart.

¹In 2012, 3,527 monthly extreme weather records were broken for heat, rain and snow in the U.S., according to National Climatic Data Center (NCDC) information, beating 2011's record of 3,251. International insurance giant MunichRe found that from 1980 through 2011, the frequency of extreme weather events in North America nearly quintupled, rising more rapidly than anywhere else in the world.

