



7 Tips to Get the **Lights** Back On



How utilities can prepare for hurricanes and heat waves

Last year's Superstorm Sandy and India's heat waves caused widespread power outages that highlighted the gap between energy demand and energy supply, and also revealed the reliability challenges utilities experience when the grid is under extreme stress. Prolonged outages caused by severe weather are a clear reminder of the important role electricity plays in sustaining life and enabling commerce in today's fast-paced, technology-driven environment.

With this year's Atlantic hurricane season and high summer temperatures in full swing, utilities should have a strategy in place to ensure rapid power outage detection and restoration.

To do this, utilities must invest in the right modern technologies and integrate them together within the electrical grid. These actions will improve the grid's reliability and resiliency, and will educate and empower customers.

Here are **seven tips** to help grid operators prepare for hurricanes and the hot summer months:

1. Communicate with customers ahead of severe weather about steps they can take to prepare and what they should do if an outage occurs. Proactive, clear lines of communication will set expectations and help customers to understand the process for power restoration. This can be done through traditional channels such as phone calls, and digital channels such as e-mail, text messaging and social media. Customers should also be encouraged to contact utilities through these same channels if their power goes out, creating a two-way dialogue between utilities and their customers.

2. Integrate the five core components of the modern grid, such as smart meters and an Automated Metering Infrastructure (AMI), Geographic Information System (GIS), Outage Management System (OMS), Distributed Management System (DMS), and Distribution Automation (DA) capabilities. Doing this will allow the pieces of the grid to cohesively work together to quickly restore power.

3. Leverage the capabilities of all grid technologies by enhancing the flow of information across the electrical network—the communications infrastructure that is the foundation for all grid applications. Utilities can use the power of big data and analytics to improve restoration time by enabling their workforce—both in the office and out in the field—with improved grid visibility and management platforms, mobile applications, social media and Google Maps technologies.

4. Invest in bringing power to your customers. The distribution area, or the part of the grid that allocates power to customers, has traditionally received the least amount of grid investment. Of the 48,000 distribution substations in the U.S., less than half have automation installed, making it difficult to monitor for and detect outages in the distribution system.

5. Leverage "last gasp" smart meter communications, in tandem with AMI's two-way communications system, to more quickly identify outages and restore electricity. When power is lost, these meters have stored enough energy to send a final communication to the utility alerting them of the outage and its location. Pinpointing the exact location of an outage will help crews to restore power quickly and reduce downtime.

6. Prepare for extreme weather by anticipating additional needs and repairs of current electrical infrastructure, and the possible reconfiguration of it. During and after the storm, damage assessment and restoration teams should then work closely to document major damage and prioritize the deployment of work crews to restore power where it is critical.

7. Invest in software capabilities to receive and analyze data in real-time during the restoration process. This will give utilities important status reports on the restoration process that they can communicate to stakeholders. After a major weather event, it is critical to ensure the accuracy of the data captured - especially outages that impact many people and industries.

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