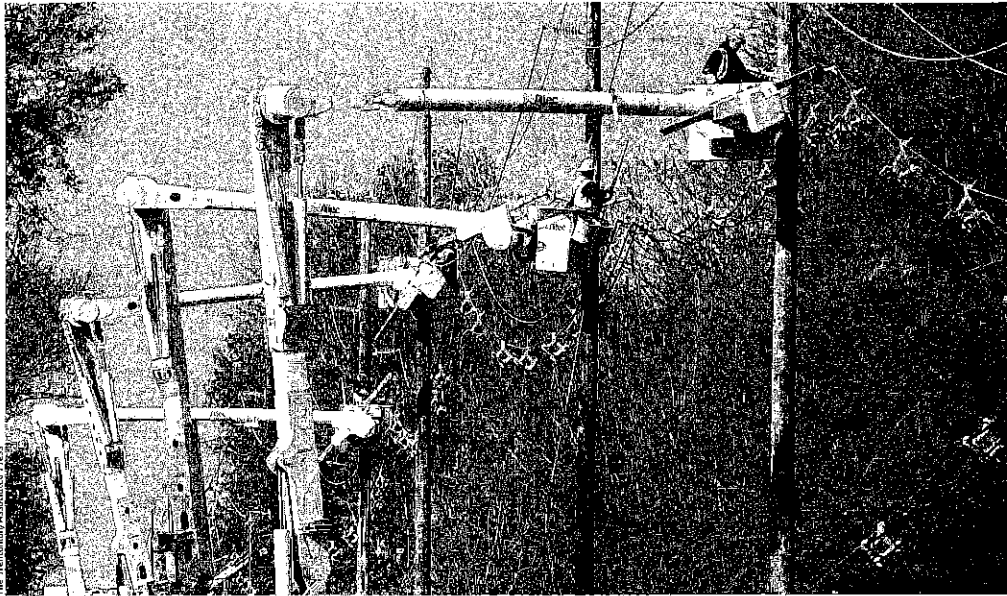


U.S. NEWS



Visiting utility crews from St. Louis-based Ameren Corp. restrung power lines in Hopewell Township, N.J., last month after Sandy.

Utilities Revisit Storm Plan

Weaknesses in Mutual-Aid System, Exposed by Sandy, Spur Calls for Fixes

By REBECCA SMITH

Utilities are taking steps to improve their response to big storms, after Sandy exposed weaknesses in the system they have relied on for more than half a century to put damaged electricity networks back together.

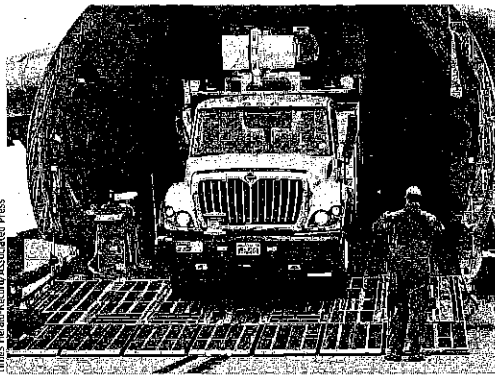
Since around 1955, utilities have used a nationwide web of mutual-assistance pacts to help one another recover from storms and other events that cause mass outages.

But while a record 67,000 utility workers and contractors from across the U.S. were mobilized after superstorm Sandy struck the East Coast on Oct. 29, some coming from as far as California, the voluntary system struggled to rise to the challenge of restoring power to millions of people.

Utilities say coordination between the nation's nine regional mutual-assistance groups could be improved so workers can be moved more speedily to new parts of the country as work is completed. They also say it took too long to get workers and equipment, including trucks, to disaster locations. In some cases work was slowed by a dearth of tree trimmers, who needed to clear areas before power lines could be strung back up.

"We think there's a better network yet to be created," said Christopher Crane, chief executive of Exelon Corp., which owns utilities in Baltimore, Chicago and Philadelphia.

Utility executives are discussing various strategies with a federal task force formed after Sandy. Mr. Crane said options being debated include equipping utility field crews with better technology, such as laptop computers with global-positioning systems that could be loaded with maps, work orders and technical documents. That would reduce reliance on paper and printers and eliminate bottlenecks.



Utility trucks from California arrive by air in Newburgh, N.Y., on Nov. 1.

marching orders.

There also is discussion about setting up strategic supply depots that any utility could tap when in need. The challenge, said Mike Niggli, president of San Diego Gas & Electric Co., a unit of Sempra Energy, is figuring out where to put the depots so they aren't damaged by storms, too.

Depots might even get a few utility trucks, he said, so crews wouldn't have to drive their own trucks long distances to reach distressed areas, the practice today. But because the bucket trucks used by repair crews cost about \$250,000, "you could spend a lot of money [on equipment] and have it never be used, if you put it in the wrong location," Mr. Niggli said.

Executives said federal officials also want to remove impediments to shorten future outages, amid concerns about events including cyberattacks, which could bring down portions of the power grid.

After Sandy, the Federal Emergency Management Agency formed the Power Restoration Task Force to cut red tape and help utilities with restoration ef-

officials hope to expand some of the assistance the agency provided after Sandy, including lending utilities heavy-duty water pumps and generators and arranging military flights to deliver equipment such as transformers and trucks.

Today's mutual-aid system was formed when shareholder-owned utilities created nine regional organizations that coordinate responses to fellow utilities in need. The system is typically tapped several times a year, after hurricanes, other severe storms and major fires. Host utilities typically reimburse the lending utilities for their costs and then pass the expenses along to their own customers.

While the system worked well for many years, experts say it is best suited for addressing outages caused by smaller storms. Sandy stretched it to the maximum, sopping up resources from all nine regions after the storm knocked out power to more than 10 million homes and businesses across 16 states with devastating rains and snow as well as briny storm surge.

Sandy isn't the only event in recent months to cause reflect-

Last summer added a new word to many utility executives' vocabularies: derecho (pronounced "deh-REY-cho"), a type of violent, fast-moving thunderstorm.

One traveled 600 miles in 10 hours on June 29, knocking out power to 4.2 million homes and businesses and hitting the Ohio Valley especially hard. Restoration was slowed by the fact utilities had little advance warning and didn't line up enough relief crews in ahead of time.

"Utilities had to order equipment, because they weren't prepared for the damage in the derecho," said Paula Carmody, head of the Maryland Office of People's Counsel, the state's official consumer advocate for utility matters. She said there was a "massive public outcry" at the lengthy outages.

Nick Akins, chief executive of Ohio-based American Electric Power Co., said utilities need to get smarter about what they install: It may not make sense to replace broken wooden poles with more wooden poles.

"We're putting up steel and concrete poles," Mr. Akins said of his company, adding that "storms provide an opportunity to make improvements" that shouldn't be forfeited.

Such improvements come with a cost, Mr. Niggli said, but "it pales compared with the economic impact of power outages."

Previous big storms have stirred up interest in putting electric lines underground. But prolonged Sandy-related outages in New York City, which has the nation's most extensive underground network, showed that isn't a panacea, especially in areas susceptible to flooding. Not only does it cost more to bury lines, but often it takes longer to bring back damaged underground networks because diagnosing the problem can be harder and it takes time to dry out vaults and other parts of a