Utilities have been installing software to manage outages, especially major ones like hurricanes, since the early 1990s. Although not all utilities have outage management systems (OMS), a significant number of them do, especially the larger ones, including those along the Gulf Coast. Spending to install such system continues to be significant, as is shown in the following chart developed by Energy Central’s Research & Analysis division.

Partially as a result of having such software, there were reports out of Mississippi Power, a Southern Company subsidiary, that about 60 percent of customers in Southern Mississippi had power only one week after Katrina and the company was near 100 percent a week later in areas where there is a system left to restore. However, crews at the scene reported that in the worst-hit areas along the coast, it wasn’t a matter of making repairs, it was a matter of rebuilding a system from scratch.

“There are large areas along the coast where not only are lines down, but we can’t even find the lines, or the poles they used to be attached to, or even where the poles used to be,” said one Georgia Power lineman dispatched to Southern Mississippi. That lineman said he expected to spend two weeks in Mississippi, one at home, near Atlanta, and then two more weeks in Mississippi for the next several months as Southern Company seeks to rebuild a non-existent grid along the coast.

“One of the first things Mississippi Power reported to us is that they had 100 percent of their customers out,” says Terry Nielsen, senior director, Product Management, in charge of product strategy for SPL WorldGroup’s outage management product, the former CES International OMS. “We’ve never had a utility with a 100 percent outage. The closest was Duke Power which was about 90 percent out in one hurricane.”

Nielsen said one thing utilities, and people who help them in situations like this, have learned from previous hurricanes helped in this case. “We used to send people out to the utilities in advance of a storm to be on-site babysitters during the course of the storm,” he says. “But what we found out is that we ended up sending them to the wrong places. Hurricanes change course and predictions are not very accurate. What we’ve been doing recently is holding people back until we know where the damage is and then sending them in.”

Nielsen says another favorable report out of the disaster area was that utilities have learned to “harden” their communications infrastructure and that although it can be spotty and virtually all cell phones were down in the area, Mississippi Power’s core communications remained up. “We have not had any problems getting information and data from our back-office sites to and from the control sites,” he says. “Utilities make sure their communications infrastructure is redundant and somewhat inland from the coast. The Internet has stayed up in most areas.”

Of course things were worse in New Orleans, where most of the city was flooded in the aftermath of Katrina. But even there crews, using Entergy’s Outage Management system to help them determine where to work first, were able to have power on in parts of the city fairly quickly.

Another advantage of OMS, besides tracking the outage and the restoration, is that it can enable utilities to track cost associated with restorations. In the midst of major outages, utilities can pay a lot more for services because they are in rush to get back to normal. But such haste can prove expensive. That’s why some utilities are turning to related automated services to handle the booking of essential services like outage management and disaster response.

Such software can handle all requests for proposals and when prospective vendors can submit their bids. The subsequent delivery of those goods and services also is properly managed. In essence, any accepted bids are controlled and if billing amounts deviate from a previously agreed upon price, they are flagged for review.

Those software systems work for both planned and unplanned events. During a hurricane, for example, suppliers will go on line and fill out a form and explain what they have done. Contractors are paid in a timely and accurate manner.

There still are major problems with mobile field information systems not being compatible when distant utilities send crews to help. Not everything is as effective as it could be, but automation is helping a great deal and did its part to hasten restoration along the Gulf Coast.
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