

Looking Back at Katrina: Five Years Later

114 current employees have been hired since the disaster

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“The whole system is down” was Vic Miller’s statement over the radio on the evening of Monday, August 29, 2005, confirming that South Mississippi Electric served no load in the on-system area and that the transmission system had been devastated by Hurricane Katrina. A control system operator with 30 years of experience at the time, Vic said what everyone knew to be true—that this was the first time the entire system had ever been so affected.

The Coastal Weather Service hurricane model for Katrina at noon on Friday, August 26, placed Mississippi’s coast in the low-risk category, instead predicting a direct hit on Destin, Florida. At 2:35 p.m. on the same day, the weather service released an emergency notice that the storm was steering westward and that the Mississippi Gulf Coast was the target. New Orleans was still a low risk threat at that time.

With the updated forecast, earnest preparations began. Securing contract construction and tree-trimming crews, booking hotel rooms, purchasing food items, staffing the command center and control center, and purchasing fuel and other materials were among the many preparations made that weekend at headquarters. Plant Moselle and Plant Morrow began procedures to secure the plant facilities, check fuel supplies and schedule staff.

Hurricane Katrina made landfall near Bay St. Louis early Monday morning, August 29, bringing 100-130 mile per hour winds, rogue tornadoes and driving rain squalls to all of south Mississippi. As the storm continued northward, Katrina unleashed hurricane force winds on most of the state. Most of South Mississippi Electric’s facilities were manned during the storm. The control rooms at the plants and the control center at headquarters had additional personnel available to monitor operations around the clock. As the storm churned up the heart of the Association’s service area, portions of the transmission system and hundreds of miles of Member systems’ distribution lines were brought down by falling trees and snapping poles, rapidly decreasing load. Both units at Plant Morrow tripped due to transmission outages and the loss of significant load in the Hattiesburg area. As the day progressed, combustion turbine units were started to meet demand and then later shut down because the load continually dropped or tripped due to transmission outages.

At Plant Moselle, employees were able to keep the plant operational—even though there was no load to serve—by activating as much plant auxiliary equipment as possible. This crucial decision allowed the plant to remain on-line, which was instrumental in the restoration and recovery process to follow. Producing a mere six megawatts and serving only its own station service, the plant was the only “light” for miles across south Mississippi on the night of August 29. The Paulding CT was still on-line and, although Sylvarena Unit 3 had tripped due to transmission outages, it had been restarted using the diesel generator.

Tuesday, August 30, was a day no one could have ever imagined or anticipated. Construction crews began assessing damage that morning, and three planes flew the transmission lines to survey the effects of the storm.

Assessment was hindered by the loss of communication. Downed phone systems and the crippled radio system limited communication with the outside world. At the time, the Association owned five satellite

phones, which proved to be key in securing additional construction crews and obtaining much-needed supplies. Generators at Plant Moselle, Sylvarena and Paulding were available and operating but were not serving any load. All three facilities were functioning as transmission islands, no longer tied into the transmission grid. All of South Mississippi Electric's Member systems experienced outages; Coast, Dixie, Magnolia, Pearl River Valley, Southwest and Singing River's entire systems were without service.

Significant damage occurred at the headquarters facility and throughout the transmission system. Moselle Unit 3 and the cooling towers at Plant Morrow were also damaged.

More than 1,100 miles of 1,600 miles of transmission line were either damaged by the storm or could not be energized due to a lack of an energized connection. Crews from Alabama Electric Cooperative (AEC, now PowerSouth Energy Cooperative) and other contractors—totaling 135 additional personnel—assisted the transmission crews in restoration efforts; ultimately 88 broken poles and 376 broken crossarm braces were replaced.

SMEPA's generation and transmission system was restored in pieces, with specific generation units operating as islands, meaning that frequency was controlled from a generator connected to the island, as opposed to being provided from the grid. During the height of restoration, four generation islands had been established including Plant Moselle, Moselle Unit 4, Sylvarena, and Benndale GT. Having been isolated from the transmission grid after the storm, the Association's Waynesboro interconnection with AEC, the Waynesboro to Hintonville 161kV line, and the Hintonville to Moselle 161kV line were reestablished by September 3. This transmission path was utilized to synchronize Plant Moselle to the transmission grid the same day.

Other major milestones included restoring the Benndale interconnection (with AEC) on September 3, the Magee interconnection (with Entergy) on September 4, and the Purvis Bulk interconnection (with MPCo) and Plant Morrow Unit 1 on September 5.

The first of 198 affected substations—Pearl River Valley's East Lake Serene—was energized at 9:39 p.m. on August 30, providing much-needed service to Wesley Medical Center. Finally, on Wednesday, September 7, the Association reached its ultimate goal: all Member systems' substations were energized, nine days after the storm.