

WHEN THE GOING GETS TOUGH

Like the old saying, “neither snow, nor rain, nor heat, nor gloom of night... will stay us from the swift completion of our appointed rounds,” so is the practice of South Mississippi Electric’s (SME) mechanical maintenance and instrumentation and electrical (I&E) employees when duty calls. Through the torrential rains and winds of Hurricane Katrina to the snow and ice of the recent winter, these men have braved many days and nights at SME’s remote generating sites to keep the lights on across Mississippi.

Four remote generating sites owned by SME are controlled from the J.T. Dudley, Sr. Generation Complex (Plant Moselle)—Sylvarena Station, George B. Taylor Generating Station (Silver Creek), Paulding Station and Benndale Station. The eight combustion-turbine units at these sites produce 427 MW of electricity that are vital to SME’s operations. Unlike SME’s other owned generating units, no staff works onsite around the clock to operate and maintain these units; instead, the responsibility is on the staff at Plant Moselle.

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When severe weather threatens the region, Plant Moselle’s I&E staff members are often dispatched to each site. One instrument technician and one electrician are dispatched as a team to man the site for up to 48 hours, or until a relief team is able to reach the site. Once on site, the men are available to run the units in the event that they can no longer be operated by Plant Moselle’s operators due to problems such as a loss of communications. The team is also

able to trouble-shoot any problems that may occur with the units. In the event of the total system going dark, technicians stationed at Sylvarena are prepared to black start Unit 3 in order to restore the system as quickly as possible.

When severe cold weather hit south Mississippi in early 2014, teams were quickly dispatched to all sites, with several teams working all night to keep the units available. One significant challenge onsite at Plant Moselle was the freezing of the sensing lines on the heat recovery steam generators for the combined-cycle units. Fourteen of the 15 units controlled by Plant Moselle ran simultaneously on several occasions during the severe weather.

Several weeks later, when the polar vortex left the region covered in ice and snow, six of the Moselle employees spent three days and two nights manning the control buildings at Sylvarena, Silver Creek and Benndale to ensure the smooth operation of the units. Electrician Robert Evans and Mechanic Glenn McInnis (Silver Creek), Instrument Technician Doug

Guthrie and Mechanic James Woods (Sylvarena), and Electrician Jeremy Parker and Mechanic Bob Sills (Benndale), manned these sites from early Tuesday morning until mid-morning Thursday when the threat to remote unit operation subsided and the roads allowed for safe travel back to Plant Moselle.

Overnight accommodations at these sites consist of cots, a restroom (toilet and sink only), a microwave, and a refrigerator (or an ice chest at Benndale). Provisions from SME include enough food to last each man for the estimated time on site—plenty of sandwiches, soup, snacks and drinks. “It is like camping, but a little better because we have a small heater,” said Sills. “You just have to have been there.”

“We are generally told to be prepared to stay onsite for 24 to 48 hours, then relief will be sent,” said Parker. “When we went out this winter (polar vortex), we were sent so that we would not have to travel back and forth on those bad road conditions.”

During the three days, when many south Mississippians were iced in at home and dependent on the comfort of electric heat, Evans, McInnis, Parker and Sills kept the units at Benndale and Silver Creek running. “Benndale ran steady,” said Parker. “We had to check numbers and monitor everything, but it ran well.”

In the nine degree temperature, the operations at Sylvarena were not so smooth for Guthrie and Woods. “The cooling tower line and cooling tower pumps froze and busted,” said Guthrie. “The water that cools the lube oil froze, which did not allow the water to circulate, then in turn made the oil too hot and could have tripped the unit. The hydraulic pressure switch froze and did trip a unit.”

Guthrie works on equipment at Silver Creek.



“We are under a lot of pressure to get the units back up during these times,” said Guthrie. “It is hard to concentrate when we are

trying to troubleshoot the problems and everyone needs an update to do their jobs.” Despite the complications, none of the sites lost communication with the Control Center.

“The danger is inherent even when it is not storming,” said Parker.

“We are often stepping across the craft lines to an area that is not our specialty, plus dealing with the weather. There are mechanical parts and the power lines all around although the breaker is open. We have to cross a lot of lines to meet the needs for communication, transformer and substation maintenance.”

“We spent three days on site with no way to bathe, no hot water,” said Parker. “The plus is, though, that we can talk on the phone to our family.”

In addition to storm duty, team members have a designated on-call weekend each month, and all staff members remain on call during the week. The guys are often called upon to answer questions over the phone; however, it is often necessary for them to handle problems in person. When on call, each member of the team must be at Plant Moselle within one hour of a callout to either tend to the units onsite or to dispatch to one of the remote sites.

According to Guthrie, Parker and Sills, life during on-call weekends revolves around waiting for call outs, and usually includes at least one. Family activities are planned around possible call outs, meaning you stay dressed for work and when your family leaves home, you take separate vehicles.

“I have done this for so long that it is a natural part of life,” said Sills. “It is just part of the job. A lot of people who could not work during those days (polar vortex) could not get paid. We were much better off. We were able to keep working and make money.”

Many of the guys on staff today answered the call of duty nearly nine years ago when Hurricane Katrina battered south Mississippi. On Sunday, Aug. 28, 2005, these guys set off for their appointed posts to prepare the units and wait out the storm the following day. Katrina knocked out all cellular communications between the sites and the Control Center, leaving the crews with radio as the only form of communication.

Instrumentation and Electrical Foreman Mark Phillips and Electrician Jeremy Parker manned Benndale, a 16.2 MW peaking unit, which remained in operation and connected to the electric grid throughout the storm. Heavy fault currents eventually caused the generator breaker to open and the unit to trip. Failed station batteries and mechanical problems left the pair unable to restore the unit. With the help of Randy Lee, mechanic I, and Marcus Ware, then assistant general manager, the unit was restored to service. Teams manned the site in alternating 24-hour shifts throughout the following days until the unit could be tied to the Alabama Power Company system. During those first few days after Katrina, Benndale played a vital role in providing power to local rural hospitals.

Several hours away, during the worst of the storm, Keith Rittenhouse, mechanical maintenance foreman, and Steve Sylvest, planner, performed manual switching outside in an attempt to keep Sylvarena’s Unit 3 online and isolated through the storm. Despite the unit isolation, Katrina eventually tripped all units and onsite power was lost. Rittenhouse and Sylvest were able to black start the unit and restore power at the site in time to serve load as the transmission lines were repaired.

Doug Guthrie, instrument technician I, checks equipment at the top of a unit at the George B. Taylor Generating Station (Silver Creek).