Environmental Affairs and Fuels

Maintaining an adequate fuel supply and environmental compliance are essential for power generators. This guarantees the availability of environmentally responsible electricity at the flip of a switch. Cooperative Energy's environmental affairs and fuels group manages this monumental task for the company's 18 generating units and construction projects.

The group, led by Joey Ward, director of environmental affairs and fuels, is comprised of Camille Daglio, senior fuels and energy accountant; Brian Hocutt, environmental engineer; Michael Sofo, fuel supply coordinator; and Hank Sossaman, environmental specialist. Hocutt and Sossaman are tasked with overseeing the Cooperative's environmental affairs. Daglio and Sofo procure the fuel required to supply the Cooperative's owned generation units. Although once separate, the two groups merged in 1998 to unify the functions in support of the company's generation division.

Environmental Affairs

The environmental affairs division ensures Cooperative Energy meets all environmental regulations by tracking all regulations, submitting routine reports, conducting impact studies, and monitoring land impacts and emissions at all generation sites.

The team tracks and monitors changes to regulations proposed and issued by agencies including the Environmental Protection Agency, Mississippi Department of Environmental Quality, the Mississippi Department of Wildlife and Fisheries, the U.S. Army Corps of Engineers, the Mississippi Department of Archives and History, Federal Emergency Management Agency, Natural Resources Conservation Service, Mississippi Department of Marine Resources, local planning and development commissions, and tribal councils. More than 130 separate reports are required by these and other agencies on a monthly, quarterly, or annual basis to document compliance and to report emission levels. Supplemental reporting is required if violations or accidents occur.

The team also conducts impact studies in preparation for generation projects and transmission projects to verify that the projects impose the least amount of impact possible. Most plant activities, powerline construction, and other general construction activities require studies. Depending upon the results of the studies, construction plans may be adjusted or the project relocated.

Cooperative Energy's environmental affairs and fuels group schedules the delivery of natural gas to the J.T. Dudley, Sr. Generation Complex and the Cooperative's other natural gas-fired units.

A recent example of a needed adjustment was at the proposed Steiner delivery point. "Unfortunately, the original Steiner delivery point project site selected by Delta Electric contained a historical site eligible for listing on the National Register of Historic Places," Sossaman said. "This was discovered during the Phase I survey performed by our archaeologist. This site was rich in both prehistoric and historic artifacts. One of the artifacts is believed to be from the Early Archaic Period (~7000 BC) and is a projectile point midsection or part of a knife. In order to utilize this site, Cooperative Energy would have had to hire an archaeologist to perform a Phase II survey. A Phase II survey is a complete excavation of the area, with artifacts collected, cleaned, inventoried, and curated. It was determined

A 25-day supply of coal is maintained at the R.D. Morrow, Sr. Generating Station to ensure adequate onsite fuel supply for the plant's two units.

the cost of a Phase II survey would be too expensive for this project. Delta Electric offered to find an alternative site in an effort to avoid the historical site within their original project site. The Mississippi Department of Archives and History would not have approved the project if we did not avoid the historical site."

The environmental affairs team also works daily with the environmental staff responsible for each generation site, including each plant's dedicated environmental engineer. The environmental engineers are the compliance representatives at their respective sites and continually collaborate with Hocutt, Sossaman, and Ward. The full environmental staff recently initiated monthly meetings in order to coordinate their efforts more effectively. The participants share their experiences, discuss problems, ask questions, and solve problems.

"We are plugged into generation projects daily," Ward said. "A lot of good things have come from these meetings. We have been able to collectively address issues and it has been very beneficial. Compliance is an everybody job, every day."

Fuels

The responsibility of maintaining adequate supplies of natural gas and coal to fuel Cooperative Energy's generation fleet rests with Daglio and Sofo. The pair procures all fuels for the company through a complex process of monitoring price indexes, forecasting fuel use, hedging against future price increases, and adjusting purchases based on MISO's unit dispatches.

Prior to entering the MISO market, fuel purchases occurred five days a week. Control Center operators scheduled unit dispatches for the week and the weekend, making fuel use predictions fairly simple and accurate. This also made the task of planning fuel for the weekend achievable on Fridays. Now, units are scheduled by MISO on a day-ahead schedule seven days a week, necessitating fuel orders and adjustments a minimum of twice per day, including Saturday and Sunday. The first orders of each day are based on Cooperative Energy's unit bids for the following day. Adjustments to the orders occur in the afternoon once MISO announces unit dispatches for the following day. If a unit scheduled for dispatch becomes unavailable, or a unit not scheduled to run is called on, further adjustments are obviously required. The team shares the tasks throughout the week and rotates weekend coverage.

In addition to controlling fuel supplies, the duo must also coordinate and guarantee transportation of the fuel from the supplier to the units. Coal is transported by Norfolk Southern Railway from the Appalachian Mountains to the R.D. Morrow, Sr. Generating Station. Coal runs are scheduled as necessary to maintain enough coal on the pile to fuel Plant Morrow for 25 days.

Natural gas is transported to the Batesville Generating Station, the J.T. Dudley, Sr. Generation Complex, Silver Creek Station, Sylvarena Station, and Benndale Station through a series of pipelines. Daglio and Sofo coordinate the availability of capacity in the pipelines in conjunction with the amount of fuel purchased.

Additionally, the pair also oversees the storage of natural gas to guard against the unexpected events of commodity shortages, transportation issues, or other circumstances that might interrupt or reduce fuel delivery to a unit. The Cooperative maintains approximately 0.5 billion cubic feet of natural gas at Petal Gas Storage that is connected via the Southeastern Supply Header, Batesville via the Tennessee Gas Pipeline, and Silver Creek and Sylvarena via South Cross Energy pipelines.

Nothing is more fundamental to the reliability of an electric generation cooperative than a stable, economical fuel supply and an intact environmental record. This division of Cooperative Energy ensures reliable, economical, and responsible energy to our 11 Member systems across the state.