

Moselle Repower Project Nears Groundbreaking

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Design and procurement work has been well underway on the repower project at Plant Moselle for more than a year. South Mississippi Electric's Board approved the project in late 2008, with an expected completion date of late 2012.

Plant Manager Chris Rhodes provided an update on the project at the All Directors' Meeting in June.

To date, just over half of the project's estimated total cost of \$267 million has been committed in contracts. Contracts have been awarded for the major components, and the purchase of the remaining balance of plant equipment is nearing completion.

Two new GE Frame 7EA combustion turbines, similar to the plant's existing Units 4 and 5, will be installed behind the boilers that currently fire Units 1 and 2. The 7EAs are simple cycle units with a summer capacity of 75 megawatts each. The turbines were manufactured at GE's Greenville, S.C., facility while the generators were manufactured in Austria. The turbines and generators arrived via rail at the Moselle rail siding in late June and early July and were then transported by Barnhart to the plant, where they will be stored until needed for installation.

In the new configuration, exhaust heat from the new 7EAs will be connected to two heat recovery steam generators (HRSGs), which are designed to provide steam for the plant's existing 59-megawatt turbine generator Units 1 and 2, creating the combined cycle system. Vogt Power International received the bid to supply the HRSGs. The bypass system, which allows the 7EAs to operate in simple cycle mode, has already been delivered to the plant. The HRSG modules and steam drums, which are being manufactured at a facility in Korea, are scheduled to be delivered sometime in October.

"We are getting a little crowded at the plant but have been able to make room for everything that has arrived so far," said Rhodes. "Our crews have done an excellent job receiving the components that have arrived and in storing them out of the way until needed. The environmental permitting necessary to begin construction has been slightly delayed but is expected to be completed by early August. Then we can get things rolling."

The site preparation, foundations and underground construction contract was awarded to James Construction Group, which mobilized on July 26. Three other major construction contracts—for installing the combustion turbines and generators; installing the HRSGs and the balance of plant equipment; and for all electrical construction—will be developed and issued for bid. Barnhart was awarded the contract to transport the larger components from the Moselle rail siding to the plant; and other contracts for final painting, paving, landscaping and cleanup will be issued for bid at a later date.

"This project is a process," said Rhodes. "Obviously, there was a great deal of effort and attention to detail required to design the project and develop the specifications needed to bid the equipment and construction contracts. As we move into the construction phase, we will be developing the construction plans and sequences and monitoring progress as we go along. It will be exciting to finally see the system coming out of the ground."

Two preliminary steps not requiring permits have already been completed. In June, SME line crews moved a segment of Line 17A to the perimeter of the plant property in order to make room for the construction area. Prior to that, the one-million gallon No. 2 fuel oil tank, which was built during the original plant construction in the late 1960s, and five-million gallon No. 6 fuel oil tank added in 1974, were demolished and removed from the site.

“When you think about how far this facility has evolved—from three original 59-megawatt steam units to what will be nearly 500 megawatts of capacity when the repower project is complete—it really is a perfect reflection of how far we have come as an organization,” noted Rhodes. “And like everything else that has occurred over the years, this project would not be happening without the teamwork of so many SMEPA employees, all of whom are dedicated to finding ways to better serve our Members.”