

### **Cooperative Energy's New Cost-Efficient Combined-Cycle Unit Is Now Operational**

PURVIS, Mississippi — A combined-cycle plant which utilizes an advanced-class turbine coupled with an existing steam turbine is now available to generate 572 MW of electric power at [Cooperative Energy's](#) R.D. Morrow, Sr. Generating Station (Plant Morrow). The 1x1 combined-cycle unit is equipped with Siemens 9000HL advanced-class combustion turbine technology paired with a steam turbine that was retrofitted from the previous coal plant operations.

Rather than build a new greenfield plant, Cooperative Energy partnered with [Burns & McDonnell](#) to evaluate all possible options, including repowering one of the utility's two coal-fired units at the site.

Due to ongoing maintenance and upkeep, coupled with the significant capital cost benefits of reusing its existing steam generator, Cooperative Energy elected to pursue a heat recovery repower strategy to propel its natural gas combined-cycle plant.

The heat recovery repower strategy utilizes the thermal power from a new gas turbine in the existing plant thermal systems. This strategy is the most cost-efficient mean of coal-to-gas conversions in North America. Utilizing the heat recovery repower strategy, Plant Morrow achieves the efficiency of new combined-cycle plants, while reducing its previous carbon footprint by half.

It was important for Cooperative Energy to retain current staff from the R.D. Morrow, Sr. Generating Station. By repowering the facility, it allowed the utility to leverage existing employees who played an active role in the project.

"Being able to utilize plant personnel was a key component to the overall success in not only the construction but also the commissioning activities," says Craig Demmel, director of the gas and heavy industrial group at Burns & McDonnell. "It also gave the operating and maintenance staff an in-depth knowledge of the facility due to the staff being an integral part of the team throughout the entire life of the project."

The construction of the project achieved more than 1.5 million work hours without a recordable incident. The project was completed on schedule and on budget despite pandemic labor challenges.

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