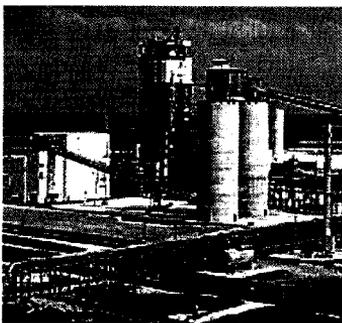


For more than 20 years, utility engineers have envisioned power plants that would substitute coal gasifiers for the traditional boilers....In the 1990s, the drawing board visions became reality.



The Tampa Electric Company's pioneering gasification combined cycle facility is one of the cleanest and most efficient coal-fired power plants in the world.

More than 20 years of technology development culminated in 1995-97 when three first-of-a-kind commercial-scale integrated gasification combined cycle power plants began generating their first electric power in the DOE Clean Coal Technology Program. Capable of reducing sulfur emissions by more than 98 percent and lowering carbon dioxide emissions by 20 to 40 percent (through higher coal-to-electricity efficiencies), these facilities are pioneering a new era in clean power generation from coal.

Wabash River Coal Gasification Repowering Project The first was the Wabash River Repowering Project in West Terra Haute, IN. Constructed at an existing power plant, the new technology substituted a Destec gasifier, gas cleanup system and GE gas turbine for a conventional coal boiler in one unit of the plant while using the plant's existing steam turbine. The project became operational in November 1995. In its first year of operation, the plant achieved more than 2,000 hours of operations on coal. In the second year, the plant has been setting monthly records for operation on coal and the production of syngas, including a record-setting continuous coal run of 500 hours from mid-December 1996 through mid-January 1997. The project received *Power* magazine's *Power Plant of the Year Award* for 1996.

Tampa Electric Integrated Gasification Combined Cycle Project In October 1996, a second gasification combined cycle power plant began operating. The Polk Power Station is a "greenfield" plant built with all new components. Employing Texaco's entrained gasifier and a state-of-the-art GE gas turbine, the project became fully operational in October 1996. Since then, it has operated 90 percent of the time, one of the smoothest startups of any project in the Clean Coal Technology Program. Tampa Electric Co., DOE's project partner, restored 1,500 acres of an abandoned surface phosphate mine near Lakeland, FL, for the plant.

The Piñon Pine Power Project In the spring of 1997, the third of this new fleet of advanced coal technology plants will move into test operations. The 100-megawatt Piñon Pine Power Project, being constructed by Sierra Pacific Power Company, will be the first in the United States to use advanced hot gas cleanup technology for the entire gasification output (the Tampa Electric project tests hot gas cleanup on a portion of the gas). It will also be the first to use GE's advanced MS 6001FA gas turbine generator. Construction is virtually complete, and the plant will be formally commissioned in April 1997.