

W. A. Parish Electric Generating Station Thompsons, TX



Located on a 4,650-acre site near the Brazos River in Fort Bend County, Texas (about 27 miles SW of downtown Houston) the W. A. Parish plant consists of four natural gas-fired generating units and four coal units. The 3,565,000-kilowatt plant is the largest generator of electricity in the largest electricity generating system in Texas, and one of the largest in the country. Its nearby neighbors include the George Ranch and Brazos Bend State Park

The four gas units rely on natural gas provided by a number of suppliers. The four coal units (units 5 through 8) consume approximately 36,000 tons of coal a day on average. In total the plant provides approximately 30 percent of the energy used in the Houston/Ft. Bend area, enough to serve over a million people. Typically three coal trains arrive at the plant each day to supply the units with low-sulfur, sub-bituminous coal from Wyoming, which burns cleaner than other types of coal.

Water from nearby Smithers Lake is cycled through the plant to cool the condenser units. It is then treated and released back into the lake. Studies have shown that fish and marine life thrive in the warm water produced by the discharge.

A baghouse filtering system is used to remove the fly ash from the exhaust gases that are released from the two 500-foot and the two 600-foot stacks. The baghouse filtering system operates much like a vacuum cleaner, sucking the ash into Teflon coated filter bags. The baghouse systems capture approximately 99.9% of the fly ash from exhaust gases. The bottom ash particles generated when coal is burned are crushed, mixed with water and conveyed to bins where the ash is stored.

The ash produced at the Parish plant is sold for use in making concrete and cinderblocks, and in paving roads. It has even found its way into Galveston Bay and the Gulf of Mexico, where it was used with great success to build experimental artificial reefs.

A Flue Gas Desulfurization System on Unit 8, referred to as a scrubber, removes sulfur oxides from the exhaust gases. The sludge from the scrubber is trucked to a landfill where it is sold as a road base material.