



Earth Contact Products, LLC.
"Designed and Engineered to Perform"

Power Company vs. Swamp Power Company Wins!

ECP Torque Anchors™
 Kingsland, Georgia



To meet the increasing demand for power an electric utility needed to install a new 230 kV transmission line. There were three towers that had to be installed across a wetland swamp. Several problems needed to be overcome before crossing the area. 1. The towers must be installed with little or no impact to the fragile environment of the wetland. 2. The wetland soil was extremely weak near the surface. 3. The soil analysis reported peat and clayey fine sand at the surface and extending down fourteen feet.

The soil was not be able to provide sufficient lateral support to keep square shaft piles or small diameter tubular piles from buckling under full load conditions. This upper layer of soil proved to be so weak that Standard Penetration Tests showed that the sampler rod fell as much as twelve inches under the weight of the rod and sampler. A layer of limestone was encountered at 30 to 40 feet that would provide bearing.

The engineers at electric utility company came to Earth Contact Products for help designing specialized helical piles that would support the tower weight without shaft buckling through the very weak soils.



Project Summary	
Project:	230 kV Electrical Transmission Towers
Products Installed:	TAF-450 Torque Anchor™ Piles – 4-1/2" Dia. x 0.337" Wall Tube Plate Configurations: 10s-14, 10s-12-14, & 10s-14-14
Number of Placements:	6 Piles & Multiple Tieback Anchors by Others
Working Load: 51,000 lb	Ultimate Capacity: 102,000 lb
Factor of Safety:	2.0 : 1 Ultimate To Working Load



The photos at top show completed tower systems across the wetlands. Above right photo shows the environmental protection used during the pile installation and tower construction.

Right is a close up view of the helical pile to tower attachment.