

PROJECT PROFILE

<i>Name:</i>	PLAYFORD 132kV LINE RELOCATIONS
<i>Owner:</i>	Electranet SA
<i>Client:</i>	Electranet SA
<i>Project Description:</i>	Line and Structure Design, Construction Engineering Support
<i>Site Location:</i>	Port Augusta, South Australia
<i>Year Completed:</i>	2006



The Playford Substation is attached to the old Playford B powerstation that has recently been de-commissioned. The substation is very old and in need of a complete refit which prompted ElectraNet to build a new 132kV yard attached to the nearby Davenport 275kV substation and divert all the 132kV lines into it.

The project involved the diversion of five 132kV feeders and alterations to another three 275kV feeders. The 2 substations are approximately 2km apart and they are located in a coastal area. Many of the lines involved are radial which makes getting outages very difficult and Live Line Techniques will be utilised extensively during the construction.



There were a number of environmental issues to consider as the site contained identified rare flora and fauna and had previously been a camp site for the indigenous people of the area. Being coastal, the terrain is very sandy with a tidal water table at a depth of about 2m. These conditions meant that the structure footings needed to be piled further complicating the design. The area is very cluttered and crisscrossed by a great number of transmission lines of all voltages which made selecting line routes difficult.

- 25 new structures were required
- Over 100 piles driven to a depth of approximately 20m will be used
- Installation of OPGW will be required for communications
- Live Line Techniques will be utilised to move towers and terminate conductors
- Work will be undertaken on two high crossing towers that support conductors that span the water at the top of Gulf St Vincent
- 20 existing structures and associated conductors will be removed

PROJECT PROFILE

*Key Project
Personnel:*

Graham Brown – Senior Transmission Engineer
Peter Sampson – Project Manager

*Special Project
Achievements*

The line designers were challenged by the variation of structure types, unusual geotechnical features, and unique environmental issues.

*Quality Standards
Applicable*

AS/NZS 9001:2000

*Specific OH & S
Requirements*

Fall restraint and maintenance access, live line work procedures, and working on the Gulf high crossing towers where access is by boat only.

