



## Oakey Zone Substation 33/11kV Zone Substation

### Project Overview

As one of 5 members on Ergon Energy's Substation Design and Construct Panel, i.power solutions was successful in winning the design and construct contract for the Oakey 33/11KV Zone substation.

The station was located two hours west of Brisbane adjacent to an existing outdoor substation with this design utilising indoor 33KV and 11 KV switchgear in separate buildings with 2 off 35MVA 33KV/11KV transformers between.

### Description of Works

The project was a design and construct project on a 'greenfield' site. i.power solutions was responsible for :

- Substation arrangement.
- Civil design.
- Earthing study and design of earth-grid.
- Site preparation and footings construction.
- Equipment selection and procurement of all station equipment.
- Design of protection and metering systems.
- Protection and auxiliaries panel design and manufacture.
- Lightning protection design.
- SCADA and communication system design and configuration.
- Substation civil works.
- Electrical installation.
- Testing and final commissioning.

i.power's design for the substation was according to Ergon's requirements, aesthetically pleasing, yet based on a transportable buildings to reduce costs and delivery times. The 2000A 8 panel indoor 33 KV switchgear was selected as ABB ZS1 and installed in the 33 KV transportable building prior to shipping to site. The 12 panel 11 KV panel was i.power's BV series indoor switchgear, again installed into the transportable building prior to being dispatched to site. Each switchroom was self contained with battery banks and SCADA and protection panels.

