

## Albany Capacitor Bank

*Client: Nokian.*

*Location: Albany, Auckland*

*Contract Value: NZ\$1.1m*

Electrix was contracted by Nokian to install a 220kV 100MVAR capacitor bank at Transpower's Albany Substation.

The design included the following installations and/or modifications:

- Install new 220kV bay 570 including CB572, CT572, ES579, SA2, C2, UBCT2 and R2.
- Installing new capacitor bank protection.
- Modification of the 220 kV bus zone protection to include CB572.
- Install circuit breaker indication to the mimic panel and SCADA.
- Install fence enclosure around the new capacitor bank.
- New lightning mast on the northern end of the capacitor bank.

The capacitor bank was enclosed with a fence with access to the fenced enclosure via an earth switch interlock.

The signal cables were ducted between the new equipment and existing cable trenches in the switchyard via a new ODJB.

The capacitor bank protection was based on Transpower's standard design. The existing 220 kV bus zone scheme was modified to include CB 572.

All the new equipment is to Transpower standard specifications and all standard clearances and spacings are adhered to. The indications for the circuit breaker were added to the mimic panel and SCADA.

The bank was essential for voltage control for the northern region and critical to Transpower's on-going supply security to the North.

There was a tight time constraint on the project as Transpower required it to be completed before winter. Design work commenced in November 2006 and Electrix utilised its skilled installation team and system technicians to commission the capacitor bank on the 12<sup>th</sup> of June 2007.

The end result was a very professional installation completed and handed over to the client within the time restraints.



Electrix Limited  
 Cnr George Bourke Drv & Mt.  
 Wellington Hwy, Mt. Wellington  
 Auckland  
 PO Box 1688, Auckland  
 New Zealand  
 Phone: +64-9-270 1700  
 Fax: +64-9-270 1701