

## Whakamaru Tie Line 220kV

**Project: Whakamaru Tiel Line 220kV**

Client: Transpower NZ Limited

Location: Whakamaru, New Zealand

Contract Value: NZ\$870,000

### DESCRIPTION

As part of Transpower's North Island Grid Upgrade project (NIGUP) Electrix was awarded through the "Yours to Lose" process the above project. The double circuit, duplex tie line connected the existing Whakamaru Substation to the new Whakamaru North Switching Station. This arrangement completes the connection to the Brownhill Substation at the Auckland end of the Whakamaru North to Brownhill transmission line. The line is presently operational at 220kV but eventually will be operated at 400kV as the lattice steel tower structures are designed for the higher voltage.

### SCOPE

The contract included the erection of three lattice steel towers, two strain structures and an intermediate suspension tower. The towers ranged in height from 45-50 metres with each of the strain terminal towers having a mass of approximately 35 tonne. The towers were erected under Electrix supervision using a 100 tonne crane.

The experienced Electrix wiring team strung the "Sulfur" AAAC/1120, all aluminium conductors, duplex, double circuit and twin "Wolf" earth-wires using the Electrix tension stringing equipment. The wiring included the compression of seventy dead-ends as the line ran from gantry to gantry. The crew also installed conductor spacers from both conductor trolleys and a crane personnel bucket for the terminal spans. There was some minor vegetation clearance carried out.

### VALUE TO CLIENT

Customer satisfaction was ensured by a highly experienced team delivering the project safely and within budget.

