

# Ohinewai Switching Station

**Project:** Ohinewai Switching Station Installation Contract  
**Client:** Transpower NZ Ltd  
**Location:** Ohinewai, Waikato  
**Contract Value:** \$7,500,000

In 2007, Transpower were required to build a new 220kV switching station at Ohinewai, near Huntly, to further support security of supply for the upper North Island. Due to its importance to the network, the project needed to be fast-tracked. Electrix was engaged during the early stages of the design process. As there was a tight time frame, construction was carried out in parallel with the design.

At the peak of the construction phase, up to 65 staff and subcontractors were on site to build and commission the switching station, complete with control room, communications hut and protection changes at four other remote substations.

The control room building and comms hut were prefabricated off site along with 103 precast concrete pads and trucked onto site to reduce the on site construction period.

One key issue was dealing with live 220kV transmission lines overhead which would eventually feed into the new substation. The lines did not allow the necessary clearance for work below, so Electrix developing a technique that, with the help of a crane and a live-line team, the conductors were lifted approximately 6 meters. This allowed work to proceed below the in service lines. This was done twice for a duration of ten and five days respectively.

As a result of the tight time frame, a complete switching station, including; 6 breaker and a half bays, one complete control room, communications hut with two antenna dishes, protection upgrades at the four terminating substation of the 220kV transmission lines, three new 220kV towers, three existing 220kV towers modified, all allowing the three 220kV transmission circuits terminating into the new switching station was completed in 6 months.

With the help of some key civil contractors, prefabricated building supplies and other specialized subcontractors, the installation cost for the project was achieved within budget and to the satisfaction of the Client.



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