

edison

Piako 110kV Tee Line Grid Exit Point Project

INDUSTRY SECTOR: Transmission - Lines

EDISON SERVICE: Project Delivery

CLIENT: Transpower



Project Overview:

In response to a request from their customer, PowerCo, Transpower initiated the construction of 2km of 110kV line and a two bay substation to provide an additional point of supply in the Morrinsville area.

The lines portion of the project required the erection of 22 concrete pole structures on private land. In order to complete the site works, all weather access tracks and crane pads were required to be constructed at each site.

The substation design included the deployment of some new equipment types including Disconnecting Circuit Breakers (DCB's) coupled with Quick Disconnect Clamps (QDS) which removed the requirement for the installation of 110kV disconnectors at the site with the philosophy of reducing the requirement for maintenance outages on the plant.

As the substation is tee'd into two existing 110kV circuits a 110kV changeover scheme has been implemented to ensure the security of supply in the event of an unplanned 110kV circuit outage.

To reduce the onsite construction time Transpower elected to use a prefabricated control room which was largely constructed and fitted out offsite, with the need only to complete foundations and field cabling onsite.

The new substation is located adjacent to the existing PowerCo zone substation in an area with limited space and access, which represented numerous challenges.

Edison Delivery:

In order to deliver the project within a compressed timeframe, Transpower recognised the need to have a strong project delivery team in place.

Edison was engaged by Transpower on this project to provide construction coordination and management services supporting Transpower, the head contractor Northpower and a number of sub-contractors.

Edison also completed all the required data entry for the new equipment into Transpower's asset management database and further designed and recorded a condition assessment of all the equipment at the time of commissioning.

A further role in the project involved managing the interaction with property owners and other project stakeholders, such as local authorities, to ensure the project objectives were met.

The 110kV line and two bay substation was completed safely within a construction period of 6 months.

Client Feedback:

"The delivery of this project, which had high importance for customers in the area, would not have been a success without the contribution of Edison's project management knowledge and experience."

Stephen McAdams, Transpower