

edison

# Kaitimako Substation

## 220kV Supply Upgrade

**INDUSTRY SECTOR:** Transmission – Lines & Substation  
**EDISON SERVICE:** Project Delivery  
**CLIENT:** Transpower



### Project Overview:

The Tauranga population and load growth meant that the existing 110kV national grid connection to the BOP area was nearing capacity. The transmission lines from the Tarukenga substation were built with the capacity to deliver 220kV but have been energised at 110kV since originally built. In order to provide increased capacity and security of supply to the BOP area the supply from Tarukenga to Kaitimako needed to be increased to 220kV.

Specific project phases were apparent from the outset, including:

- The connection of existing transmission lines to deliver 220kV to Kaitimako substation,
- The installation of new equipment at Tarukenga and Kaitimako substations to support the new connection,
- The installation of new protection, systems at Tarukenga and Kaitimako substations for the 220kV transmission lines,
- The installation of a new switchyard with two interconnecting transformers at Kaitimako to support the new connection.

### Edison Delivery:

The Edison team were engaged to provide site based support which included managing the supply of principal supplied equipment, undertaking weekly site coordination meetings and ensuring all outage / commissioning works were effectively planned.

Due to the complexity of this project, the Edison team was also engaged to develop detailed risk plans for each phase of the project. Eleven separate construction and commissioning stages were noted, each with their own inherent risks.

The project included the construction of a new 220kV switchyard and the installation of two 100 tonne transformers which were transported from Auckland to Tauranga on flatbed trucks during the early hours of two mornings.

During the installation phases of the project, the Edison team also provided support during commissioning.