

edison

Generator Expertise Slashes SAIDI Impact

INDUSTRY SECTOR:	Distribution - Stations
EDISON SERVICE:	Project Delivery, Technical Support
CLIENT:	Powerco



Project Overview:

Powerco recently commissioned their new 110kV capable transmission line between Coroglen and Kaimarama. The line construction and subsequent commissioning was the culmination of several years of effort on a very complex project in the Coromandel Peninsula.

The final piece in the puzzle included three days of remedial line work, substation and protection changes to accommodate the new line. The work could only be completed de-energised and it was estimated that the SAIDI impact would be 20 minutes.

Edison was commissioned by Powerco to undertake a feasibility study which recommended that Powerco establish a temporary generation project to support both Whitianga and Coromandel townships.

The feasibility study included the identification of alternative options to the initial planned 12 hour outages and had a defined SAIDI target of 2 minutes.

The outages ran over three days and required approximately 15MW of temporary diesel generation to mitigate loss of supply to customers.

The generators were initially synchronised through an 11kV feeder arrangement and later changed to operating in island mode.

The net result was that the SAIDI impact was slashed from an anticipated 20 minutes to 1.6 minutes.

Edison Delivery:

Edison undertook the detailed design working closely with Powerco engineers, Tenix, Aggreko and Thames Coromandel District Council to determine the optimal physical layout and electrical points of connection. This included the design of temporary cable arrangements to enable the connection of generation equipment to existing 11kV transformer cables.

Edison engineers managed the establishment of contingency plans to cover all unplanned eventualities as well as planning and preparation for the temporary generation installations at Whitianga and Coromandel substations.

During the outages Edison worked closely with Tenix, Aggreko, Northpower, Electrix and Powerco to ensure the periods where diesel generation was on load, ran as smoothly as possible.

Client Feedback:

“A tremendous effort by all and a special thanks to the Edison team who were integral to the success of the project and the SAIDI savings”

Andrew McLeod, Powerco