

Fiordland National Park Subconductor Spacer Replacement

Project: Replacement of Subconductor Spacer Replacement, Invercargill-Manapouri 220kV & Manapouri-Tiwai 220kV A Lines
Client: Transpower NZ Ltd
Location: Fiordland National Park
Contract Value: NZ\$450,000

Electrix was contracted to replace the subconductor spacers on 105 spans on the lines from the Manapouri Power Station in the Fiordland National Park. Spans were located in West Arm, Manapouri with access only by barge 30km across Lake Manapouri. The other 70 spans were accessed via the Borland Road, a transmission line access road over the 998 metre high Borland Saddle.

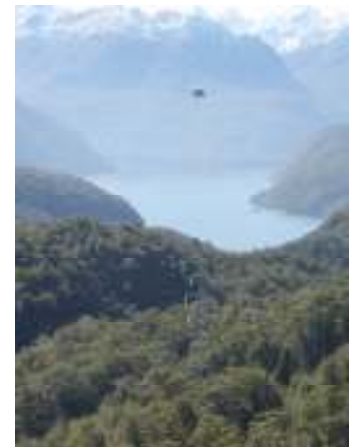
The work was identified as part of Transpower's condition based planned routine maintenance. The scope of work included replacement of subconductor spacers on :

- 29 spans on Manapouri-Tiwai A line
- 76 spans on Invercargill-Manapouri A line

The works were carried out in partnership with Helicopters Otago whose highly skilled pilots and high tech communications systems contributed significantly to on site productivity and safety performance.

On both lines the work involved traversing the 1150 metre long span across the West Arm of Lake Manapouri. Due to the proximity to native vegetation below the conductors the work was carried out without the lines in service. Whilst the lines may have been out of service the most effective method of replacement utilized Electrix Ltd live line helikarts and live line techniques. The use of helikarts provided several advantages over conventional methods including ease traversing strain towers and not needing to access every tower structure by vehicle in the mountainous terrain. The work was completed without incident or accident in the remote and challenging environment.

Extreme communications from within the National Park was only possible using satellite phones. Good environmental management was a priority within the World Heritage Fiordland National Park. Detailed environmental risk analysis was undertaken and environmental protection instructions issued to field staff. Excellent on site management ensured the work was successfully completed whilst maintaining high environmental standards.



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