

Live Work Helicopter Insulator Washing

Project: Live Work Helicopter Insulator Washing

Client: Mighty River Power

Location: Waikato NZ

Contract Value: NZ\$200,000

The Arapuni Power Station was first commissioned in 1929 and has eight generating units, giving it the largest capacity of any single station in the Waikato hydro system. The station's close proximity to Waikato's large urban and industrial areas means the station is available to provide voltage support and frequency keeping in the area.

Electrix's Condition Assessment staff were commissioned by Mighty River Power, the station owners, to undertake a full assessment of the tie line from the Power Station to the Outdoor Station as part of routine maintenance of the stations components. During this work it came to the attention of the CA staff that the glass insulators on the tie line has serious pollutant and lichen attachment issues that potentially could impact on the station generation integrity through possible line tripping.

Interestingly: Electrix teams 15 years earlier had replaced all the insulators on the tie line as the original American Ohio Brass insulators had reached the end of their useful life after over 60 years of service.

The tie lines have an inherent challenge as far as access is concerned in that they traverse the gorge and the lines run, virtually, vertically down from the ODS gantry to the Power Station roof, no plant or machinery can access this very precipitous face to obtain access to the actual insulators.

Electrix, in conjunction with Skywork Helicopter, came up with a solution to high pressure wash all the insulators on the 110,000 Volt tie lines using live work techniques,. As obtaining outages on the station equipment at this time of year is very difficult the Mighty River Power team saw the value in having the work undertaken live.

Electrix and the Helicopter company jointly developed, to international standards, the required procedures to accomplish the work safely and to the client requirements.

The work was undertaken on a brisk Waikato morning in mid July with a minus 6 degree frost still on the ground when the work party flew from the tender truck to the work site. Synchronised teamwork between the pilot and the water blasting crew had the job done in a very short time and another very satisfied client ensued.



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