Fact file / Success stories

Transpower, New Zealand
McKee Substation for 110 kV
“Higher availability and less maintenance”

Customer need

One of the key criteria for Transpower when planning for new high voltage substations was to minimize their maintenance. The vast majority of the substations are close to the sea and will be exposed to wind borne salt, promoting corrosion in open air contacts used in disconnectors. The climatic conditions in New Zealand demand high quality switchgear to maximize the power availability for the consumers. New Zealand is subject to high levels of seismic activity, therefore, Transpower has adopted the IEEE 693-2005 HIGH standard for all their switchgear.

ABB solution

To attain a solution with high availability and a minimum of maintenance, ABB chose to offer DCBs (Disconnecting Circuit Breaker).

With a DCB solution, all open air disconnectors are eliminated. The interrupter fulfills the requirement of a disconnector and permits substations to be built with minimized need for maintenance and space, low failure rates, increased safety and low life cycle costs.

The safety is increased since maintenance and repair activities are significantly reduced, and during maintenance safe earthing is applied remotely from the control room.

The DCBs, together with the current transformers, were earthquake tested and verified in an independent laboratory before delivery.

Facts

Customer | Transpower
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Country | New Zealand
Location of project | Taranaki
Scope of supply | Disconnecting Circuit Breakers for 110 kV from ABB Ludvika, Sweden.
Earthquake-proof design
Year of delivery | 2012
Substation designed by | Transpower
DCB benefits

- Replaces the conventional combination of circuit breaker and separate disconnectors
- Optimized substation design
- Improved availability
- Reduction in maintenance requirements
- Safe, simple, fast and reliable installation

Substations equipped with disconnecting circuit breakers enable smarter, safer and greener substations in comparison to conventional substations.

A complete program with full support

ABB provides complete resources in electrical high voltage technology, and stands for innovative new approaches with the focus on efficient and environmentally friendly power transmission.

Our comprehensive product line, which besides disconnecting circuit breakers also includes conventional circuit breakers, surge arresters, instrument transformers and power capacitors, makes us a comprehensive supplier of both individual high voltage apparatuses and complete turnkey installations.

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