

Special protection for new wind farm

ABB has supplied and advised in the implementation of power protection and isolation using a special medium voltage switch-fuse combination switchgear in unit substations for one of the country's largest wind power projects - the Longyuan Mulilo De Aar 1 & 2 wind project in the Northern Cape.



R15 million order

ABB's NALFWind 36 kV switch-fuse combination units will be incorporated into 163 unit substations as part of a R15 million order for the R5 billion wind project, which was part of the third round of the department of energy's renewable energy programme.

The units are specially designed for use in wind electricity distribution environments where HRC fuses are required to handle high levels of fault energies to provide protection and isolation on the windfarm electricity network.

First time

It is the first time that this switch-fuse combination units will be used in a unit substation at an on shore wind farm project where the switch-fuse forms an important component of the network.

The fuses used are a new design, based on fast-acting ABB CEF-S, which secure and protect against faults in low-voltage switchgear. The fuses are specially designed to achieve the lowest possible breaking current value within 100 ms (milliseconds). ABB is working to develop a unit substation prototype, to be supplied by Powertech Transformers, in which the combination units will be mounted.

Breakthrough

"This is an advanced technology breakthrough in the way that the application has been developed for these windfarm projects to maximise cost effectiveness and safety," says Mike de Swardt, regional manager, Western Cape region, ABB South Africa.

The Longyuan Mulilo De Aar 1 & 2 – Wind Project, commenced towards the third quarter of 2015 and is expected to be operational by the last quarter of 2017.

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