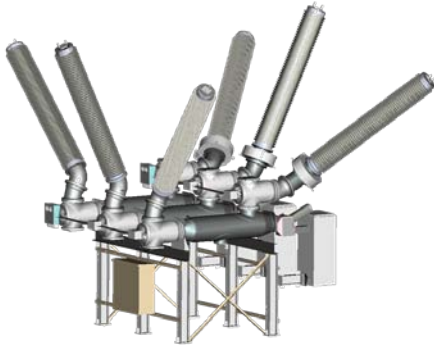


NGETEN01 Q28 Attachment

The presentation at the bilateral meeting contained a number of images indicating aspects of mobile substation bay development and deployment used in other projects which could be considered in the OEM design for mobile substation bays.

Hybrid and mobile switchgear



The image is of the ABB PASS 420kV switchgear currently being tested and should be available for a first deployment in 2014. The compact design includes rotatable bushings (connections) which can be lowered for transportation and then moved into position quickly without testing on site.

Rapidly deployable transformer



The 400kV unit was developed by ABB to provide a fast deployable solution during a construction outage (Spain). It is a single phase design, using temporary oil bunding to protect the environment (in case there is an oil leak). This was developed for a specific case in Spain however the principal could be used for the MSB application.

Motorised cable drum



This image is of a motorised cable drum developed by Areva (now Alstom Grid) which has been designed for frequent operation to store, transport and quickly deploy cable as part of a temporary bay installation. The application is suitable for application up to 145kV. The example is for 66kV.

Temporary transformer oil bund.



This is an example of a containment solution developed by an OEM to provide environmental protection for a spare unit while it is waiting to be returned to the factory for refurbishment. As suggested above, this could be easily adapted for use on the MSB project.

Temporary busbar configuration.



The image is from a National Grid substation where the OEM rigged up a temporary overhead line and busbar arrangement to transfer demand around the substation, while construction was carried out in another part of the substation. This could be a method employed where the MSB cannot be located adjacent to the connection to the 400kV busbars or the customer substation.