Mobile HV testing: TrafoSiteTesting
The transformer test floor that comes to your site

With a growing number of aging transformers in the field, the potential for failure and the need to verify equipment reliability will pose increased operational challenges. ABB can bring its full range of transformer testing capabilities onsite including induced and applied testing with partial discharge measurement.

The ABB mobile high-voltage power transformer test system enables a full range of testing on all types and brands of transformers and reactors, as well as on cables, breakers and other HV equipment at your site.

This three-phase test system is based on a static frequency converter which is especially designed for performing testing according to IEEE Standard C57.12.00, IEC Standard 60060-3 and CSA C88 M90.

This system verifies the condition of a transformer, including the insulation system, and allows informed decision making. The system is operated by personnel with many years of experience in HV testing and power system equipment analysis. Measurements taken with the mobile high-voltage test system are evaluated by diagnostic experts who have access to modern modeling tools. For ABB and ABB legacy brand transformers the engineers will have access to original OEM internal assembly details to support the evaluation of testing results.

Multiple applications
• Following transportation and installation of new or factory repaired transformers
• After onsite repairs (such as TrafoSiteRepair service)
• During maintenance outages on high-value, critical transformers
• Before bringing a spare transformer into service after a long period of storage
• After a field incident to verify if the transformer can return to service
• When diagnostic test information indicates a problem in the transformer
• Applied voltage testing on cables, breakers and other HV equipment.

Adaptable and easy set-up
All components are installed in a 53-ft. road trailer. The system is contained in a shipping container that can also be transported by standard ocean freight methods. Set-up only takes a few hours and testing can usually begin the same day the equipment arrives on site.
**Full range of test capabilities**

- Induced voltage testing (transformers as large as 765kV and more than 1000 MVA have been tested)
- Electrical and acoustical partial discharge measurements
- Applied voltage testing on transformers up to 500 kV line to ground
- No load losses at 60 Hz and 50 Hz
- Failure localization
- Short-circuit impedance
- Heat run/temperature rise test
- Frequency range 15Hz to 200 Hz
- Dielectric frequency response (DFR) tests
- Sweep Frequency Response Analysis (SFRA)
- Thermo-vision scans
- All routine electrical tests
- Load loss testing
- Sound level testing
- Extended core loss run

**Site requirements**

- The ABB mobile test system requires a suitable compacted surface for egress and parking.
- The test system requires 480 volt, 3 phase, 500kVA power for high voltage testing. Heat run tests for large transformers will require a significant amount of additional power.
- The ABB mobile test unit must be able to park within 82 ft (25 meters) of each transformer to be tested, unless special provisions are made prior to deployment.