

LEAFLET

ABB mobile substation

Versatile transportable solutions



ABB's mobile substation is a fully customizable solution to provide temporary or mobile power for medium and low-voltage applications.

Each mobile substation is designed for plug-and-play type field connections, with the ability to distribute power to any field loads.

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Mobile substation with an incoming 14.4kV line feeding a 12.5MVA transformer stepping down to a 2.4kV Arc-Resistant switchgear line-up. Relay room is separated from the switchgear to provide maximum safety and operational effectiveness

Main features

ABB's mobile substation can be customized to meet various specifications, including:

- Protection schemes
- Advance diagnostics
- Electrical control
- Switchgear features (for example: ARC-resistant switchgear)
- Varying highway safety rules. These are taken into consideration in the design phase

ABB's mobile substation has enhanced safety features, such as:

- Relays located in a separate compartment with restricted access. Access is restricted to operations engineers only
- Cable connections built and engineered to trip upstream breaker if cable compartment is tampered with while the system is energized

ABB offers service plans to maintain the mobile substation.

Key benefits

- Mobility
- Operational efficiency
- Cost savings
- Customizable

Selected applications

- Maintenance: The mobile substation is used to provide temporary power while maintenance is performed on the permanent substation at a facility
- Temporary power: The mobile substation is used when power is needed temporarily at a site (i.e. well pads)
- Mobile power needs: The mobile substation is used to supply power at multiple locations within a facility (i.e. tailing ponds)



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01
34.5kV Recloser close coupled to a 3MVA transformer with 600V secondary

02
Quick-connect & tamper-resistant cable compartment below the 2.4kV switchgear

03
Enclosed relay room to protect electronics and allow technicians to operate the system in a controlled environment



02

Mobility

- Bringing power distribution without major capital & permanent investment
- Provides ability to relocate power consumption for relocating projects without procuring new capital power distribution assets
- Allow for maintenance of permanent substations without prolonged outages

Relay neutrality – All relay brands are possible to be utilized, allowing to match operator familiarity

Project approach:

- Project FEED Study – ABB will provide dedicated engineer to review application, loads, location and decide best path forward to meet unique needs of end user
- After completion of FEED and presentation, ABB engineers a Functional Design Specification and preliminary models
- FDS and models will be further detailed after into a final design package and construction to begin
- After project completion, ABB global service team will be available to service mobile substation at their regular maintenance intervals no matter where mobile substation travels



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