

WBSEB, Bishnupur 220/132/33 kV Substation

Substation for transmitting power up to 180 MW to South West Bengal

Customer Benefits

- Strengthening and augmentation of Eastern grid
- Improved voltage levels and reliable power for bulk Industrial consumers in South West Bengal
- Global Time Synchronization of all numerical relays. Precise calculation of commercial losses from the time of fault to restoration
- Detection and assessment of faults recorded in the disturbance recorder at Bishnupur substation by WBSEB Central Testing team at Kolkata through remote LAN network.
- Enhanced revenues as project commissioned 56 days before schedule

ABB Solution

- Turnkey 220/132/33/11kV kV greenfield substation with 8 bays at 220kV, 13 bays at 132kV and 11 bays at 33kV with 2 nos. 160 MVA, 220/132/33 kV, 1 no. 50 MVA, 132/33 kV and 1 no. 31.5 MVA, 132/33 kV Power transformers
- Global Positioning System based time synchronization with numerical relays in WBSEB system
- Control and relay panels with IEDs on IEC 61850 protocol
- Establishment of remote end network at WBSEB head quarters, Kolkatta
- Power line carrier communication equipment
- Complete civil works including control room building, fire fighting pump house, engineer quarters and dormitories, foundations for towers and equipment
- Substation commissioned in 2008



220kV Bus Bar System and circuit Breakers



220/132/33 kV 160 MVA Power Transformer



33 kV Switchyard



220/132/33 kV Control and Relay Panel



Substation Overview

ABB's Substation Offerings

ABB offers substation solutions for power transmission, distribution and substation automation and protection by:

- Delivery of turnkey AIS and GIS substations for utility and industrial applications
- Service, rehabilitation and upgradation of existing substations
- Substation automation systems; bay control, unit protection, power system monitoring and wide area system solutions



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