

PGCIL, Bhatapara, Chhattisgarh 400/220kV substation with automation

Substation for power evacuation up to 500 MW

Customer Benefits

- Facilitating reliable, secure and economic power transmission within and across central region.
- Load data communication facility with Mumbai Load Despatch Centre
- Substation to be remotely operated from Khumari substation located at a distance of 100 kms
- Substation automation system with IEC 61850 compliance
 - High system availability with redundancy
 - Guaranteed system openness for future expansion and integration

ABB Solution

- Turnkey 400kV / 220kV greenfield substation solution with 6 bays at 400 kV and 8 bays at 220kV including auxiliaries
- IEC 61850 compliant Sub-station Automation System. Panels installed in outdoor air-conditioned kiosks with 100% temperature control redundancy
- Outdoor kiosks installed in high voltage yard with reduced cabling
- Complete civil works including control room, fire fighting pump house, roads, fencing and foundations for 400 kV and 220 kV towers and equipment
- Substation commissioned in 2008



400kV Switchyard with 800kV Tertiary Transformer



220kV Switchyard

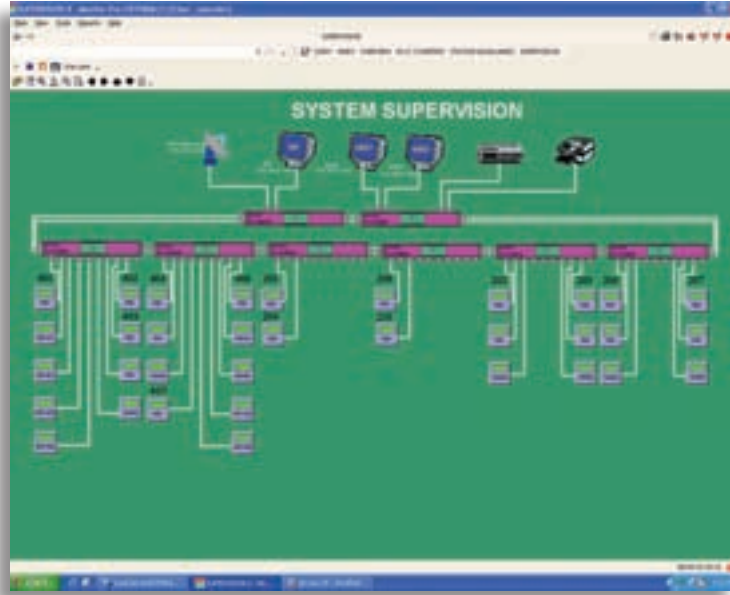


Outdoor AC Kiosk for Substation Automation panels



Substation Automation panels inside the AC Kiosk

IEC 61850 Substation Automation Solution



Benefits

- Fully interoperable system with IED 670 for protection and control
- Cost-efficient solution through full exploitation of IEDs' functional capability including GOOSE-based functionality
- High system availability with fully redundant operator workstations and independent gateways
- Guaranteed system openness for future hardware and functional extensions through high-quality engineering

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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