

Yong Peng North Substation

The substation is located in the southern part of Malaysia, closed to Johor Baru. The 275 kV AIS consists of a Double Busbar system, 6 Line Feeders, 3 Transformers, 1 Bus Coupler and 1 Static VAR Compensator. The 132 kV AIS consists of a Double Busbar system, 8 Line Feeders, 3 Transformers and 1 Bus Coupler.

It is the first retrofit project in which inCONTROL Tech Sdn. Bhd. (formerly known as VA TECH SAT Sdn. Bhd.) replaces the conventional control panels by an advanced Substation Automation System (SAS). After factory acceptance test the on-site replacement is done feeder wise during very short outage periods on weekends. So far all feeders have been commissioned in the live substation.

The system consists of one (1) operator work place SAT 250 with 2 monitors. The station control device SK 1703 is designed in redundant configuration and the bay control units AM 1703 are single modules for each 275 kV feeder and each 132 kV feeder.

Station controller and operator work place are connected via Token-Ring LAN, while communication between station controller and all bay control units are performed on a redundant fiber optic high-speed field bus in star configuration.

Protection relays are interfaced through IEC-870-5-103 protocol.

The Substation is connected to the National Load Dispatch Center by use of WISP+ protocol.



Figure-1: before starting the retro-fitting