



R&D Fund Project

Development And Implementation Of Feeder Automation SCADA System For TNB Distribution At Senai Industrial Area, Johor



Retrofitted System

Project Overview

In response to the need of reducing the frequency of supply interruption, TNBR proposed a “Feeder Automation SCADA system” project to TNBD in which the restoration time could be greatly reduced. This project was approved in 2003 with the aim of automating 110 units of 11 kV sub-stations in the Senai Industrial Area, Johor. This is the first SCADA project implemented on a large scale at the 11 kV network. The SCADA system is capable of monitoring and controlling the 11kV distribution network remotely from Southern Regional Control Center (SRCC).

Deliverables

A complete Feeder Automation System that consists of a Master Station, dial-up wireless communication network, RTU and RMU Retrofitting/Motorization System at the plant sites. The completed standalone system was subjected to a series of test at all substations that includes Site Acceptance Test (SAT), and System Simulation Test (SST). It was delivered fully commissioned in order to determine the overall system performance before handing over to the project owner, TNBD.

Benefits

With the completed Feeder Automation System, it is expected that the overall system reliability will be improved especially to reduce customer minute loss (breakdown time), maintenance cost and also reduction on the risk of accident during switching activities. The system should be able to improve the breakdown restoration time from security level 3 (4 hours) to security level2 (15 minutes).



RTU and Control Panel