



Client: Ministry of Information Affairs
Consultant: GEMAC
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005 — REHABILITATION OF MEDIUM VOLTAGE NETWORK AT BAHRAIN TELEVISION

Background

Bahrain Television Complex was established in the early 1960's by the Ministry of Information Affairs and the complex contained a medium voltage network comprising of several substations to cater for the ongoing power requirements. The network had gradually expanded beyond the working capacity of the cables. The network components such as the transformers, ring main units (RMU), and other critical switching devices were already beyond their stated functional life. Thus, creating a very unreliable power system network that was feeding the most important communication networks belonging to the Ministry of Information Affairs authorities. Before a major catastrophe could take place, a decision was made to rehabilitate the current network to ensure the reliability of the operation.

Case Study

An MV system network was designed to create an intake substation fed by two primary circuits from the EWA (Electricity and Water Authority), one active and one standby, to ensure continuity of power. The MV switchboard was designed to establish two ring main units to take care of the current loading while provision for the third ring main for the future loads. The switchboard installed was from Reyrolle Pacific, New Zealand, a subsidiary of Reyrolle UK. It comprises of two incomers, a bus coupler, and three VCB columns, 600A, on each side of the bus. The existing network was systematically cut and reconstructed using new cable lengths to the configuration of the new network in smaller shutdowns organized and agreed during the mobilization period. Eventually, at each stage of modification, the system was tested and commissioned partially till the whole system was in place.

