



Canal Company for Electricity Distribution - SCADA/DMS Expansion

Sector of activity :

Energy Control Systems

Client :

Canal Electricity Distribution Company

Year of completion :

Ongoing

Financing :

Client

Mandate :

To design and supervise the installation of new telecontrol equipment to be installed in existing remote terminal units, as well design and supervise the installation of new remote terminal units for Canal Company for Electricity Distribution (CCED), which operates and maintains the distribution network in the Suez Canal and the Sinai region of Egypt. This project is an extension of the original SCADA/DMS project completed by SNC-Lavalin Energy Control Systems in 2001.

Description :

CCED is a government utility serving the Suez Canal and the Sinai region of Egypt. It is the largest of the six distribution utilities in Egypt, with a power distribution network covering seven governorates and New Cities district. The total area served by CCED is approximately 287,391 square kilometres.

CCED has recently placed more emphasis on customer service and cost containment. The three major factors that accounted for this renewed emphasis were (a) the desire to operate more efficiently, (b) greater public awareness of service quality, and (c) concern of possible deregulation within the electricity distribution industry. CCED projected growth figures between

2000 to 2010 showed a need to increase the number of distribution points on the 11 kV network from the currently installed 78 to 123; additionally, CCED desired to include telecontrol capability to the existing remote terminal units.

This project was an extension to the original project for a complete SCADA/DMS completed by SNC-Lavalin Energy Control Systems in 2001. The work performed under this technical services contract was engineering supervision and the provision of specific mechanical / electrical engineering to add digital output capability to 78 existing kiosk remote terminal units and 16 spare RTUs. Additionally, SNC-Lavalin Energy Control Systems installed and made operational 65 new sites consisting of 25 substation remote terminal units and 40 distribution remote terminal units.

The project involved the coordination of subcontractors and the client personnel to ensure the upgrade and new installations were executed within schedule. The project was divided into several phases over a period of 24 months. Initially two surveys (electrical / mechanical & communication) were conducted to define the installation requirements. The telecontrol phase prepared the existing Ismailia sites

(physical breaker cells) for digital output (or telecontrol) capabilities, followed by the installation of the CAE telecontrol modification kits to be incorporated into the RTUs, and completed by commissioning and testing of the digital outputs for the existing 31 sites. These activities were repeated for the New Cities sector for the existing 47 sites. The final phase added the new substation RTUs and distribution point RTUs in Ismailia and New Cities.

All phases required local testing at the distribution point and substation, commissioning of the new sites, and site acceptance testing with the SCADA/DMS system.

The SCADA/DMS provides tools to effectively manage the operation of the distribution system in real-time, and provides planning tools that identify ways to optimize the use of the utility's resources and improve the quality and reliability of service.

Services provided :

An engineering services contract for subcontractor management, engineering supervision, and provision of mechanical/electrical engineering to add digital output capability to existing remote terminal units.



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