



ENERGEX - SCADA/DMS

Sector of activity :
Energy Control Systems
Client :
Energex
Year of completion :
2002
Financing :
Client

Mandate :

To design, supply, install, and commission a new SCADA/DMS for Energex, which operates and maintains the distribution network in the southeast corner of Queensland, Australia. The scope of work included the delivery of all hardware, software, documentation and training for the new system, as well as all necessary testing, field installation and adaptation services.

Description :

Energex is a top 100 Australian company, managing sophisticated energy distribution networks and delivering world-class energy products, services and expertise throughout eastern Australia and in New Zealand. Energex is recognised as one of the nation's leading energy companies; it retails and distributes electricity, natural gas, liquefied petroleum gas and a suite of value-added products and services to more than 1.1 million residential, industrial and commercial customers. Energex's gas and electricity networks span nearly 25,000 square kilometres throughout southeast Queensland and northern New South Wales, including Brisbane, the Gold Coast and Sunshine Coast.

The SCADA/DMS is based on a distributed client/server architecture designed to internationally recognized

standards. Commercial off-the-shelf equipment is used throughout the system, which provides simplified maintenance and easier system expansion. The system includes redundant HP Alpha servers, HP Alpha workstations, communication equipment, and peripheral equipment connected to a redundant local area network. The SCADA/DMS is fully redundant for high availability, and provides automatic fail-over features.

The SCADA/DMS software is based on the GEN-3 product developed by SNC-Lavalin Energy Control Systems. The distribution network model is maintained in an Oracle RDBMS stored on RAID-1 storage arrays, and is complemented by a set of memory-resident real-time databases that are replicated to all of the servers and workstations on the local area network for optimal performance. All database edits can be performed online without the need to failover any servers or workstations to bring the changes online. The system includes redundant serial channels supporting the Conitel, DNP3, RDCCOM, and SIP/SAP protocols for communicating with remote terminal units. The system includes the ICCP TASE.2 protocol for communicating with other control centre.

The DMS applications are fully integrated with the SCADA system, and include the Distribution Network Model, Connectivity Analysis, Demand Estimation, Load Flow, Fault Level Analysis, Switching Management Subsystem, Service Call Management, and Load Control functions.

The SCADA/DMS provides the system operators with valuable tools to assist in operating the electric power system to high performance standards, in particular, improving the quality and reliability of service. This is achieved primarily by the distribution management applications developed by SNC-Lavalin Energy Control Systems. These applications provide a means to effectively manage the operation of the distribution system in real-time, and provide planning tools that identify ways to optimize the use of the utility's resources.

Services provided :

A turnkey contract including project management, hardware and software design, system integration, acceptance testing, documentation, customer training, and all necessary field installation and adaptation services.



SNC • LAVALIN

CUSTOMER CONTACT :

ENERGEX

Level 1
2 Bowen Bridge Road
Fortitude Valley, Queensland
4006
Australia

Mr. Grant Woolston
Tel.: +61-7-3407-5771
Fax: +61-7-3407 5059

CONTACT US :

SNC-LAVALIN

ENERGY CONTROL SYSTEMS INC.

2425 Pitfield Blvd.
Montreal, Quebec
Canada H4S 1W8
Tel.: +1 (514) 334-6780
Fax: +1 (514) 334-2610
Email: ecs@snclavalin.com

www.snclavalin.com/ecs

SNC-LAVALIN ENERGY CONTROL SYSTEMS INC. SNC-Lavalin is Canada's largest engineering and construction firm. SNC-Lavalin Energy Control Systems has nearly 40 years experience, with systems installed on six continents. Our SCADA, Distribution Management System (DMS), Energy Management System (EMS) and Generation Management System (GMS) products are being used by some of the world's largest utilities. We also offer SCADA systems to monitor and control water distribution networks and natural gas distribution systems.