



ENERGEX - SCADA/DMS

**Sector of activity :**

Energy Control Systems

**Client :**

SPARQ Solutions Pty Ltd.

**Year of completion :**

Ongoing

**Mandate :**

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

**Description :**

ENERGEX is a leading Australian energy company, distributing electricity through a sophisticated network to more than 1.2 million residential, industrial and commercial customers. ENERGEX's electricity network spans more than 25,000 kilometres in south east Queensland, 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 simplifies maintenance and system expansion. The system operates on HP DL-series servers and HP XW-series workstations running Red Hat Enterprise Linux. The SCADA/DMS is fully redundant for high availability, and provides automatic fail-over features. Redundant servers will be

installed in separate buildings as a security measure, and a Disaster Recovery System will also be provided.

The SCADA/DMS software is based on the GENe product developed by SNC-Lavalin Energy Control Systems. The distribution network model is maintained in an Oracle 10 RDBMS stored on RAID-1 storage arrays. All database edits can be performed online without the need to fail-over any servers or workstations to bring the changes online. The system supports DNP3 and RDCCOM protocols for communicating with remote terminal units, and ICCP TASE.2 protocol for communicating with other control centres.

The GENe DMS applications are fully integrated with the real-time data acquisition, and include the distribution network model, network connectivity analysis, outage analysis, switching management, service call management, and load control functions. The DMS includes an automated Audio Frequency Load Control (AFLC) function to help manage network demand during peak load conditions. 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, software design, system integration, acceptance testing, documentation, customer training, field installation and adaptation services.



**SNC • LAVALIN**

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**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.