



## SCADA/EMS/MARKET SUPPORT SERVICES



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PSC services at a glance

## TransGrid SCADA Connection for NEMMCO

TransGrid provide the Australian National Electricity Market Management Company (NEMMCO) with SCADA data from the state of New South Wales via a dedicated data link to NEMMCO's facilities in Sydney and Brisbane. Generation targets from the electricity market are sent directly to generation units across this link by NEMMCO. TransGrid have recently completed the commissioning of a new ABB SPIDER acquisition and control system which has included commissioning of a new data link to NEMMCO.

Prior to July 2002, data between TransGrid and NEMMCO was carried over an Alstom Inter-Site Data (ISD) link. However, with the commissioning of TransGrid's new ABB system, this data will be carried over an Inter Control Center Communications Protocol (ICCP) link. TransGrid have nearly eighty remote terminal units (RTU's) which have been cut over to the ABB system at a rate of two to four per week. Initially only SCADA will run on the ABB system, with work on EMS applications to follow the completion of RTU cut overs.

For NEMMCO, this required extensive work in managing the RTU transition to the ABB system and subsequent failure of substation data for the cut over period. Understanding the extent of work involved, NEMMCO used the services of PSC to assist through provision of tools to aid management of the primary databases and to provide resources to handle the bulk of the work.

The challenges of this project included analyzing the data available from the ABB system on a per substation basis, the preparation and testing of databases and displays, dealing with the large number of

data items changing their source each week, maintaining coherency between two to three primary databases across two sites, retuning of generator control parameters and co-ordination with all parties involved. In addition, provision was required for complete roll back of all changes up to two months into the RTU cut over program, should a significant issue arise with the ABB system.

The roll back option was not required and having overcome several early problems with the ABB ICCP link implementation, the cut over of RTU's concluded in April 2003 with TransGrid decommissioning their Toshiba SCADA. Loss of data was kept to a minimum through all RTU cut overs resulting in no adverse effects on the electricity market. TransGrid are now in the process of commissioning their EMS applications on the ABB system. With the additional data available from New South Wales, NEMMCO are now enhancing their EMS models to provide a more robust solution with a greater degree of accuracy.



*Pictured is William Malcolm of PSC working on a TransGrid SCADA terminal at NEMMCO*

After some time trying to pin these busy people down to a date, Friday the 25<sup>th</sup> July saw PSC Hamilton take time out to have some serious fun outside of their usual activities.

The day involved 4X4 motorbike riding through forest and farm country near Rotorua. Riding through the tight forest and mud bogs was a definite highlight. Even though it was a perfect sunny day, we still found ourselves riding through iced over puddles at 1pm in the afternoon!

Further entertainment consisted of Luge riding which can only be described as a full contact sport, stock cars if you prefer, as the team battled their way down the luge track at some incredible speeds.

## PSC Hamilton Team Building



L-R Dave James, Tim Hood, Warwick Glendenning, Kent Horan, Tony Weller, Ranil De Silva

The team building day was great fun and it was especially good to catch up with members who, due to their work overseas, we had not seen in over a year. Contact PSC for employment opportunities.

## PSC Assists Transend with System Studies

Ranil de Silva is presently in Hobart assisting the System Controller in Transend to prepare the 2003 Planning Statement for Tasmania. The Planning Statement is revised annually and maps out the expected development of the transmission system until year 2018. The work involves a series of system studies to investigate the effects of load growth, Basslink, wind generation, and transmission reinforcement. The system studies include short circuit, load flow, and dynamic stability analysis. PSC has been carrying out this type of planning study since 1995 for a number of power systems in New Zealand, Australia, and South-East Asia.



# PSC engaged by NZ's Electricity Supply Industry Training Organisation to perform an IT Infrastructure Audit and Security Review

The New Zealand government have asked the Electricity Supply Industry Training Organisation (ESITO) to take a leadership role in the labour market development for the electricity industry. The accuracy and integrity of ESITO's data is vital as it is accessed by employers and employees and used as the basis for financial transactions to reward training completion.

Bob Howlett ESITO's CEO, recently engaged PSC to perform an IT infrastructure audit and information security review. ESITO has grown rapidly over the last few years and has seen the need to keep up with this growth and the increased sophistication in IT management required to support it.

Warwick Glendenning one of our IT infrastructure specialists led this project.

PSC provided a detailed audit of ESITO IT infrastructure.

Warwick engaged KPMG's Information Risk Management team, lead by Rupert Dodds and Shaun Trewern to carry out the ISO 17799 information security policy review and network infrastructure security review.

As a result of the audit, PSC in conjunction with KPMG is now assisting ESITO to develop a more comprehensive information security policy in line with ISO17799, and developing service level agreements with ESITO's major IT vendors. Additionally, ESITO has engaged PSC on a long term basis to provide IT management support, which includes management and monitoring of IT vendors, provision of technical advice and IT project management.



## Power System Consultants Welcome to Tony Nguyen

Tony Nguyen has recently joined PSC. Tony comes to us from the UK where he has been carrying out power system studies. Tony will be assisting Alstom EAI with the delivery of the Midwest ISO market system in Carmel, Indiana. Tony has held a range of positions in the electricity industry which have included experience developing and supporting electricity market systems, power systems analysis and long range grid planning. Welcome Tony.



# PSC SERVICES AT A GLANCE

## RTU/SCADA/EMS

- Development, factory acceptance testing, on-site commissioning, and on-going support for RTU/SCADA/EMS systems
- Development of customised applications to interface between different platforms
- Supporting application, display and database management for systems in New Zealand and Australia
- Project management
- Customisation of existing advanced EMS applications
- Interfacing of real time SCADA systems with corporate databases
- Document preparation including specifications

## Electricity Market Services

- Development of applications for wholesale electricity market systems
- Support of custom Oracle and Microsoft based client applications
- Energy market optimisation, pricing and resource scheduling

## Electrical Engineering Services

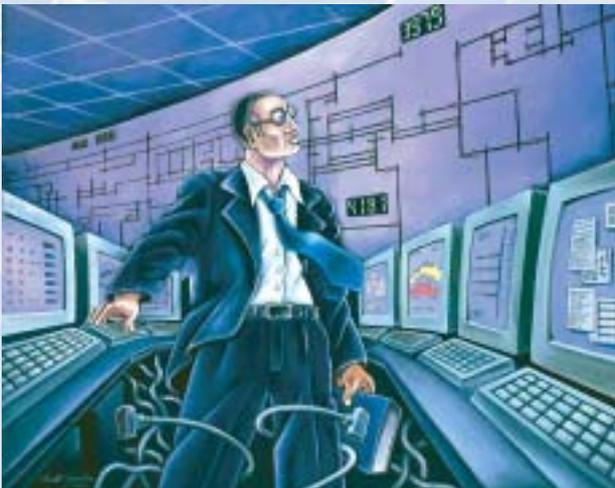
- System studies
- Project management
- HVDC transmission planning, specification, factory testing, and commissioning
- Support for operations centres
- Draughting
- Implementation of quality assurance and safety systems
- Training

## Transmission

- Design, project management and engineer-to-contract for transmission line projects
- Technical investigations
- Maintenance management
- Asset information and data services
- New technology investigations

## Telecommunications and IT Networks

- Strategic planning
- Technical investigations
- Project management
- Design
- Operations and maintenance support



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