

PSC

Power Systems
Consultants

PSC NEWS

NEWS AND VIEWS FROM THE TEAM AT POWER SYSTEMS CONSULTANTS NOVEMBER 2005

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Transpower renews SCADA/EMS Support Contract

PSC has had a long and successful involvement in providing SCADA and EMS support services to Transpower New Zealand Limited. PSC is pleased to continue this association with the renewal of the SCADA/EMS and Database Maintenance, Project and Support Services contract for an additional three years.

The contract scope of work covers database and application support, display maintenance, commissioning new control and indication points, user training and support for Transpower's National Coordination Centres in Hamilton and Wellington and the Regional Control Centres in Otahuhu, Haywards and Christchurch.

PSC has a team of four SCADA engineers based in Hamilton, Tony Weller, Dave James, Tim Hood and Mike de Leeuw. Mike has recently joined PSC and has a background in substation maintenance, control system support and telecommunications.

The contract is managed by PSC's Auckland based Senior EMS Consultant Ross Gaspard. Ross is responsible for managing all of PSC's Electricity Supply Industry SCADA support contracts in New Zealand, which includes support for multiple vendor platforms.

PSC looks forward to working with Transpower on this contract over the next three years.



The Hamilton PSC SCADA Team Tim Hood, Tony Weller, Dave James and Mike de Leeuw

Revenue Metering Upgrade for Meridian Energy

In March 2004 Meridian Energy engaged Keith Fisk and Simon Lister of PSC to conduct a thorough investigation into the current state of its revenue metering installations at hydro power stations in New Zealand. Included in the study were a lifecycle analysis, technology investigation and a business requirements review. The study resulted in recommendations being put forward for a replacement strategy, allowing Meridian to utilise the multifunction measurement capability of new technology revenue meters to improve business processes.

In August 2005 PSC was again engaged by Meridian Energy to move forward with the outcomes of the revenue metering investigation to develop a trial design for installation at Tekapo A power station. PSC's scope of work includes

conceptual design, detailed design, meter configuration and interface testing, installation and commissioning supervision. The objective of the trial is to develop and prove a design that can be easily rolled out to Meridian's other hydro stations, with minimal impact on availability of generators and associated business systems.

New meter technology will allow Meridian to significantly simplify installations, yielding reduced maintenance and improved reliability in systems and processes for collecting data from the meters. Multi-function measurement capability will provide high accuracy, instantaneous measurement of generator output quantities for generation management systems to further optimise generator utilisation.



PSC Project Director for George Town Bus B Upgrade

Transend Networks Pty Limited (Transend) owns and operates the electricity transmission network in Tasmania Australia, transmitting electricity from 29 power stations to substations around the state. One of these substations is George Town which supplies major industrial customers in the George Town area and is one of Transend's key substations in Tasmania. It is also the connection substation for the Basslink HVDC link being commissioned at the present time.

In 2004 Transend commenced an upgrade of the George Town Substation by replacing an existing 220kV bus and five bus-selecting disconnectors. The project also included replacement of the lightning protection system, protection and control system upgrades and the installation of voltage transformers on selected transmission lines.

Chris Collie-Holmes, the Engineering Manager for PSC Australia was the Project Director for this upgrade in conjunction with Ascension Consulting from Hobart, and worked closely with Transend staff at their head office in Hobart and at Trevallyn.

Transend chose an experienced team to deliver the project, with Maunsell Australia as designers and Aurora Network as constructors. It is a credit to the project management and contractors working on site, as there was a 100 per cent safety record throughout the project. In October Transend's team received recognition for this project with an Engineering Excellence Award from the Engineers Australia Tasmanian division.

NEMMCO renews Market and Energy Management Systems Support Contracts

The National Electricity Market Management Company Limited (NEMMCO) administers and operates the National Electricity Market for electricity supply in the Australian Capital Territory and the States of Queensland, New South Wales, Victoria, South Australia and Tasmania.

PSC Australia has been providing support for NEMMCO's Market and Energy Management systems since 1999 and is pleased to be able to continue this relationship after renewing these support contracts for an additional 3 years.

PSC have three staff based in NEMMCO's Dispatch and Security centre in Sydney supporting the Energy Management and Market systems. Warren Young, Nick Sinnis and Steve Hunt work as part of the NEMMCO support teams providing front line support for these operational systems, as well as assisting in the implementation of new technology and system upgrades. In the past few years PSC staff have performed significant roles in the development of market systems functionality and energy management system upgrades. PSC are currently actively involved in similar processes associated with the realtime systems as well as the control centre facilities.

PSC values its relationship with NEMMCO and is looking forward to strengthening this even further over the next few years.



PSC's Managing Director Tony Armstrong and NEMMCO's Wholesale Market Systems Manager Luke Barlow.

PSC Telecommunications Engineer completes Cisco Certified Network Associate Course

Tim Hood, one of PSC's telecommunications engineers based in Hamilton, has recently successfully completed the Cisco CCNA course run for the past 18 months by the Waikato Polytechnic. Tim has found this course very valuable. The IP networking skills he has developed complement his extensive background in power

systems telecommunications. Tim is looking forward to applying his new IP networking skills to his work in power systems telecommunications design, operation and maintenance for PSC's clients.

David Monk Celebrates 10 years of Excellent Service

David Monk is the Engineering and Lines Manager for PSC New Zealand and completed 10 years of service with the company on the 16th September 2005. Since joining PSC, David has been involved in a large number of project management and technical roles covering power system protection, supervisory equipment, HVDC systems and the New Zealand Wholesale Energy Market.

David spent three years seconded to ABB Power Systems in Sweden for the development of the new generation of HVDC controls (MACH2). This work involved development and factory testing of the control hardware and software for various HVDC and HVDC Light projects, including the Sweden – Poland monopole, the Gotland and Tjaereborg HVDC Light projects, as well as ad hoc assistance to other projects. David was also involved in site commissioning of the Gotland, Directlink and Tjaereborg projects. When David finished his secondment with ABB Power Systems, he assisted with the installation and commissioning of the Murraylink HVDC Light project in Australia. PSC staff were involved with the testing and commissioning of all converter station main circuit and auxiliary plant, HVDC controls and protection equipment.

Since returning to New Zealand in 2001, David has been involved in a number of projects and support for the Wholesale Electricity Market system. The PSC management team congratulates David



David Monk and PSC's Managing Director Tony Armstrong

on 10 years of excellent service with PSC, and thanks him for his dedication and commitment to all of the projects he has been involved in.

PSC would also like to congratulate Sarah Leask, Graham Long and Warren Young who have all recently completed 5 years service with PSC.

Reflecting World Best Practice

Power Systems Consultants maintains a Quality Management System certified to ISO 9001:2000

Power Systems Consultants quality management system is certified to the world's most widely recognised quality system standard, ISO 9001:2000. The ISO 9001 quality management systems standard is used by over 550,000 organisations in 159 countries.

Key cornerstone concepts of the ISO9001 standard include the requirement to demonstrate ongoing continuous improvement in the organisation, and the requirement to have a customer focus in the activities of the company.

While ISO9001 certification was obtained back in September 2002, ongoing regular audits are required to maintain this certification. PSC chose the JAS-ANZ Accredited certification body 'Telarc' to complete the certification assessment process.

Telarc recently completed the revalidation audit to renew PSC's certification in New Zealand, and this audit resulted in zero conditions – indicating how well PSC's quality management system compares to recognised world best practice standards.



PSC Assists ISO New England's ASM Project

PSC's market systems engineer Tony Nguyen recently commenced a new assignment for ISO New England, based in Holyoke, Massachusetts. ISO-NE is responsible for the day-to-day reliable operation of New England's bulk power generation and transmission system, with an installed capacity of 32,000 MW. They are presently undertaking a major project to add co-optimized ancillary service dispatch (regulation and reserves) to their existing energy market systems.

The Ancillary Services Market (ASM) project marks the first major development to ISO-NE's market operations since they started their "standard market design" (SMD) market in March 2003.

The ASM involves significant changes to the real time market clearing and ex-post locational marginal price calculation software, provided by Areva T&D. PSC's role is to provide client acceptance testing for the Areva solving engines. This builds on PSC's experience in SMD market systems following Tony's previous assignment for the Midwest ISO.

PSC welcomes new staff

Garry Konings

Garry Konings has recently started working as an associate consultant with PSC.

He is a Telecommunications and Networking Consultant based in Hamilton, and specialises in consultancy, design and project management for voice and data networks. Garry has extensive experience in both telecommunications and networking and has held senior positions in IBM, Logical Networks and Telecom.



Hoang Tong

Hoang Tong has joined PSC Australia as a Senior Power Systems Engineer. Hoang has previously worked for LogicaCMG in Australia and Meritec in New Zealand and has extensive experience in system studies, power system development studies, real-time power management systems and software development, industry training and electrical design. Hoang will be working in the PSC Australia SCADA/EMS and Engineering groups. He is currently working as part of the NEMMCO EMS upgrade project in Sydney performing application migration and testing.



Mike de Leeuw

Mike de Leeuw joined PSC in September 2005 as a SCADA Engineer. Mike has previously worked for ABB and Electrix maintaining Transpower and Mighty River Power equipment in the Waikato region. His most recent role has been as an industrial technician for Concord Technologies in Hamilton working on PLC programming for industrial clients. Mike will be based with the PSC Hamilton team working on the Transpower SCADA and EMS support contract



Marina Smith

Marina Smith is an experienced Electrical Engineer with key capabilities in system studies, model development, and generator capability assessment.

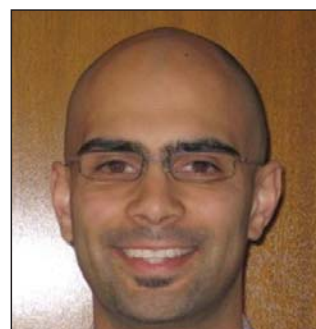
Marina is also a qualified Protection Engineer for substations, lines and cables. She joined PSC in October 2005 and is currently supporting Transpower System Operations in their Investigations group.



Warren Brooks

Warren Brooks has joined PSC Australia as a Junior Engineer. Warren has a Bachelor of Electrical Engineering from RMIT University in Melbourne and has experience in switchgear design and management. Warren is

interested in building a career within the power industry and will be working in the Australian SCADA/EMS group supporting our clients in the Melbourne area.



Wilson Kwenda

Wilson Kwenda joined PSC in October 2005 as an Electrical Engineer. He has many years of experience in the Zimbabwean generation, transmission and distribution industry, as well as marketing and HV equipment

insurance. Wilson will be supporting Transpower System Operations in their Operations Planning group. Wilson will be based at the National Coordination Centre in Hamilton.



Tim Drake

Tim Drake has joined PSC as a part time draughtsman. He will initially assist with project support work, transmission line schematic drawing updates and following Transpower drawing system familiarity, will be

available as a full draughting resource. Tim will shortly complete a Bachelor of Industrial Design from Victoria University. Tim has a particular interest in 3D modeling and has won a global award as top student for a project in Solidworks (a 3D modeling program).

