



**PSC**

Power Systems  
Consultants

# PSC NEWS

NEWS AND VIEWS FROM THE TEAM AT POWER SYSTEMS CONSULTANTS

APRIL 2007

## CONTENTS

Page 1

PSC awarded ElectraNet SCADA Support Services Contract

Page 1

ElectraNet Telecommunications Planning Role

Page 2

More Aerial Laser Survey (ALS) Projects in Australia and New Zealand

Page 3

Transpower SDH FOTS Projects

Page 3

PSC opens new Melbourne CBD Office

Page 4

PSC welcomes new staff

Page 4

PSC staff ride Segways

### Power Systems Consultants New Zealand Ltd

PO Box 57095, Mana, Wellington,  
New Zealand

Phone: +64-4-232 7680

Fax: +64-4-232 7682

Web: [www.psc.co.nz](http://www.psc.co.nz)

Email: [info@psc.co.nz](mailto:info@psc.co.nz)

### Power Systems Consultants Australia Pty Ltd.

PO Box 273, Flinders St PO,  
Melbourne, VIC 8009, Australia

ABN 35-089-074-019

Phone: +61-3-8616 0460

Fax: +61-3-9654 6833

Web: [www.psc.au.com](http://www.psc.au.com)

Email: [info@psc.au.com](mailto:info@psc.au.com)

## PSC awarded ElectraNet SCADA Support Services Contract

ElectraNet Transmission Services Pty Ltd is the transmission service provider for South Australia. As part of this service provision, ElectraNet operates and maintains an AREVA SCADA/EMS system for control and monitoring of the high voltage transmission network. In 2006 ElectraNet competitively tendered a 3 year contract for SCADA Support Services for this system. PSC was successful in winning this contract which includes: point to point commissioning, database and display maintenance, back up control centre and system recovery services and applications administration.

The transition to the new arrangement started on the 19th March and will continue until the end of June 2007. PSC has three SCADA engineers based in Adelaide working on this contract. ElectraNet has an option to renew the contract for a further three years.



ElectraNet's Information Services Manager Mike Walters and PSC's General Manager Warwick Glendenning shaking hands on the new support contract

The award of this contract strengthens PSC's engagement with ElectraNet across several lines of business including aerial transmission line surveys, telecommunications engineering and SCADA support.

## ElectraNet Telecommunications Planning Role

ElectraNet engaged PSC's Telecommunications Engineer John Grace for a 10 week period to continue aspects of the telecommunications planning effort while they were advertising the role of Telecommunications Planning Engineer.

The main component of the work was preparing the annual telecommunications regional development plans for South Australia that are prepared along with the power network regional development plans. ElectraNet analyses eight regions – one of them, the 275 kV network, spans most of the other regions. Other work included making preliminary investigations and providing estimates for the evaluation of new points of supply.

John says that Adelaide has been a very pleasant place to be over the summer months with daytime temperatures ranging from 18 to 40 deg C and no rain to speak of. It is also known as the festival state with many different forms of entertainment on in February and March.



Mt Millar substation on the Eyre Peninsula in South Australia, surrounded by the Mt Millar Wind Farm



# More Aerial Laser Survey (ALS) Projects in Australia and New Zealand

PSC and OPTEN, the leading ALS service provider, have tendered for and been awarded two ALS projects for Transpower in New Zealand and TransGrid in Australia. These projects follow on from previously successful projects for Electranet, O'Donnell Griffin and Transpower.

Aerial laser surveying of transmission lines is conducted by a helicopter fitted with a high accuracy laser system. The laser scans a swath under the helicopter's flight path, detecting conductors, towers, the ground plane, and other features such as roads, buildings, vegetation, etc. GPS stations are placed strategically along the route to provide differential GPS for accurate helicopter positioning. Weather stations are also placed in the field to enable accurate modeling of the conductor temperature at time of survey. All this data enables the creation of accurate PLS-CADD models of the surveyed transmission lines. This in turn provides valuable information to enable asset owners to look at potential threats to their assets, up-rating opportunities and/or new build activities for future development.

## Transpower New Zealand

In November 2006, PSC and OPTEN were successful with their tender to complete Transpower's Transmission line aerial laser survey. Transpower is the asset owner and system operator of New Zealand's electricity transmission network - the National Grid. The ALS field operations and data collection on 1500km of transmission lines in the North and South Islands of New Zealand was successfully completed in February and March 2007.

PSC and OPTEN would like to thank the subcontractors who assisted on this project and helped ensure the successful outcome. Helicopters New Zealand provided the helicopter services, the National Institute of Water and Atmospheric Research (NIWA) provided the meteorological data collection and weather modeling, and Connell Wagner assisted with GPS and surveying expertise.



*Helicopter preparation for ALS in the Wellington region of the North Island*

PSC and OPTEN are currently in the process of delivering the fully processed data, ortho-rectified photos, clearance violation reports and PLS-CADD models to Transpower.

PSC's Lines Manager Phil Cross and PSC's Project Engineer Ross Crust managed the project with Tim Drake and Kevin Hart assisting with the ground survey operations. OPTEN had a very experienced field team who performed the data acquisition, manning of the GPS stations and preliminary processing.

## TransGrid Australia

PSC and OPTEN have recently been successful with a tender to provide ALS to TransGrid in Australia for 2500km of transmission lines on their network. TransGrid owns and operates the high voltage electricity transmission network throughout New South Wales in Australia. Preparation is underway for the field operations which are scheduled for April and May 2007.

With the latest in ALS technology, and highly skilled and experienced staff, PSC and OPTEN will continue to offer the best ALS service to transmission service providers throughout Australia and New Zealand.



*Setting up GPS equipment for the HVDC circuit ALS in the South Island*

# Transpower SDH FOTS Projects

Stewart Drake of PSC has provided Engineer to Contract Services for 2 recent Transpower NZ Ltd SDH FOTS projects. This involved management of 5 contracts with design consultants/installation contractors and major equipment suppliers.

The first project involved sites at Fighting Bay, Oteranga Bay, Haywards and Transpower House in the Lower North Island. This work was an extension to a SDH system between Islington – Fighting Bay – Stoke which was installed in 2006 as part of Transpower's upgrade of the transmission network in the Upper South Island. The project was driven by the need to replace an existing NEC565Mb/s FOTS which was installed in the early 90's and Transpower's future requirements for communications and wide area network needs between the North and South Island.

The second project involved Transpower sites at Southdown, Penrose and Otahuhu in the Auckland area. Transpower identified a need for additional telecommunications capacity into these sites to support its regional control centre at Otahuhu and other data communications needs.

The overall scope of work for the projects that Stewart managed was divided into two parts:

Design & Installation Contracts for general site preparation for the SDH FOTS installation including fibre connections for SDH equipment, GPS clock for network synchronisation, external alarm management for SDH node equipment, provision of routers for network management connections, installation of 48VDC Power Supplies



*SDH Node Equipment at Otahuhu Substation*

at 4 sites, the multiplexing / interfacing and migration of services and decommissioning of the existing NEC PDH FOTS equipment between Haywards and Oteranga Bay.

Design / Installation Contract (Post award) for the supply and installation of Alcatel Lucent SMC SDH Node Equipment.

Due to other project dependencies, both projects were on a very tight time frame with services requiring to be available 4 months from contract start-up. This included the supply of major equipment items from Nokia, Eaton Powerware and Alcatel Lucent.

---

## PSC opens new Melbourne CBD Office

Degraves Street and Centre Place are both famous 'laneways' of Melbourne's CBD and home to allegedly the best coffee and food places in the city. This area is also the location of PSC's new Melbourne office. The new office on the mezzanine floor of the Emirates Building at 257 Collins St can comfortably accommodate six staff, has a large meeting room with conference facilities and is ideally set up to host training courses.

For the last five years PSC's office in Melbourne has been based in Richmond which is about 15 minutes from the CBD. With the recent relocation of some of PSC's key clients to the CBD, it was decided to relocate the PSC office so that PSC engineers are only a short walk from these clients. Consequent to the move, the contact details for PSC Australia are now as per the front page of this edition of PSC News.



*PSC's new office in the Melbourne CBD*

