



Specialist Consultants
to the Electricity Industry

PSC NEWS

News and Views from the team at PSC

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PSC Supports Western Power Transmission Planning & Projects

PSC Australia's Electrical Engineering team continue to provide engineering support to the Transmission Planning & Projects Section of Western Power Corporation located in Perth, Western Australia.

Western Power is a State Government owned corporation that builds, maintains and operates the electricity network in the south west corner of Western Australia. The Western Power Network covers the area west between Kalbarri and Albany, and east to Kalgoorlie and the surrounding Goldfields. The network forms the vast majority of the South West Interconnected Network (SWIN), which together with all of the electricity generators comprises the South West Interconnected System (SWIS). It provides an essential service by transporting electricity to more than one million connected consumers.

The Transmission Planning & Projects Section in Western Power is responsible for the medium and long term planning of the transmission network, connection of major electricity consumers

and generators; and sponsoring of transmission projects. Since late 2010, PSC staff have been working within the section providing expertise in various capacities including development of load area strategic plans for different parts of the network, project planning reports, grid connection studies and business cases.

PSC's relationship with Western Power has grown from strength to strength. In a period of 12 months, our team members supporting Western Power at any one time have grown from two to six persons. We have worked hard to understand the value and culture of Western Power. This has enabled us to build trust and work seamlessly as part of their team to deliver common goals.

PSC values the strong working

relationship developed with Western Power, and we are looking forward to a new chapter where we will be establishing an off-site engineering office to support Western Power more efficiently.

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PSC Supports AltaLink with the Integration of HVDC Technology

PSC has supported AltaLink in its preparations to integrate HVDC Technology into its existing operations. Staff from PSC Australia, PSC USA and PSC Canada have worked closely with AltaLink staff to develop an HVDC Integration Plan in anticipation of the proposed Western Alberta Transmission Line (WATL) Project.

The WATL Project will be the first High Voltage Direct Current (HVDC) project for AltaLink. The first stage of the WATL Project is a 1,000MW monopole HVDC line from Sunnybrook to Crossings in Alberta, Canada.

The development of the Integration Plan commenced with a review of AltaLink's existing organization and of the anticipated challenges required to implement and operate the new

technology. Recommendations were developed on how to resource the operations and maintenance of the new technology, with a view of leveraging AltaLink's existing organization and processes.

PSC developed a schedule for integration which comprised a number of activities to be implemented in parallel with the development and construction of the WATL project to ensure that AltaLink is ready to operate and maintain the link from the moment it is commissioned. These activities include putting operation and maintenance staff, procedures and assets in place and the training of staff involved in the O&M of the WATL Project. PSC also developed a high level budget that will be required to implement these activities.

Carly Duerr, AltaLink's Manager of System Operations Engineering said, "The PSC team brought a very practical perspective to the plan from its experience in the implementation and operation of HVDC links. By developing the Integration Plan, AltaLink is able to ensure that it is operationally ready and avoid many of the mistakes that asset owners have made in the past."

The PSC team consisted of Les Brand from PSC Australia, Jack Kelly from PSC Canada and Ken Pratt from PSC USA. The PSC team received strong support and input from staff within AltaLink to jointly produce an Integration Plan which aligns both the needs of the new technology and AltaLink's existing organization structure and culture.

Professional Development Partner (PDP) programme

PSC New Zealand is pleased to announce that the company is a Professional Development Partner with the Institute of Professional Engineers New Zealand (IPENZ).

This is reinforcement by PSC, that we see the ongoing development of engineering skills as essential and underpinning the future of a sustainable and reliable electricity system. PSC therefore encourages the development of engineering specialists and undertakes this through membership of national and international electricity industry organisations like EEA and CIGRE, through support for educational institutes by providing scholarships for Power Engineering undergraduates and by actively encouraging and supporting staff in their professional development.

We are pleased to be part of a mutually beneficial relationship between IPENZ and PSC based on a commitment to career and professional development, professional registration and professional engagement. PSC is an employer of choice for engineering professionals.

The vision for the PDP programme: IPENZ and Professional Development Partner organisations will strengthen



Johan Hendriks (PSC Senior Consultant) and Warwick Glendenning (PSC Group CEO) collecting the PDP certificate from Steve Reindler (former IPENZ President) at the recent IPENZ Fellows and Achievers dinner

the professional excellence and standing of the engineering profession by providing "whole of career" professional development pathways for all engineers within PDP organisations, within the profession generally and throughout the community.

PSC involvement in CIGRE

As part of our commitment to continuous staff development and information sharing within the electricity industry, PSC maintains a very active role in CIGRE (International Council on Large Electric Systems) through its involvement in CIGRE's Australian National Committee (ANC-CIGRE).

Warwick Glendenning, PSC Group CEO serves on the board of ANC-CIGRE and PSC staff participate in the following Australian Panels:

- C1 – Systems Development and Economics
- C2 – Systems Operations and Control
- B4 – HVDC and Power Electronics
- D2 – Information Systems and Telecommunications

This year PSC will be hosting a stand at CIGRE Paris and at least three of our engineering staff will be attending the sessions.



In particular we would like to congratulate Dr Mansour Mohseni, a Power Systems Engineer in PSC Australia's Perth office, for being awarded an ANC-CIGRE 2012 Scholarship. The scholarship will contribute funds towards expenses associated with Mansour attending the CIGRE General Session being held in Paris this coming August. Mansour joined PSC in early 2012 following the completion of his PhD from Curtin University in late 2011. He has published over 25 journal and conference papers and will be presenting a paper at the New Zealand EEA conference being held in June in Auckland on the topic of hybrid wind farm stability.

Simon Oliver and Tracy Beleski celebrate 10 years of Excellent Service with PSC

PSC would like to congratulate Simon Oliver and Tracy Beleski who have both recently completed 10 years of excellent service with the company.

Simon Oliver is a Senior PSC Market Systems Engineer based on-site at EMC (Energy Market Company) in Singapore. Simon provides analysis and advice on market situations and carries out support and maintenance tasks as well as enhancements to the Market Clearing Engine (MCE) for EMC. He has also had key roles on a number of successful projects at EMC.

Tracy Beleski is the Administration Supervisor based at our Wellington office in Tawa. Tracy is responsible for many areas of the PSC administration and finance operations for Australia and New Zealand, and works closely with the CFO to ensure all aspects of business are completed to a high standard.

Simon and Tracy have shown dedication to their projects and the PSC management team would like to thank them for their commitment and excellent service over the past 10 years. PSC is very proud of its record of long term staff employment. We now have over 20 staff who have celebrated 10 years of excellent service with PSC.



Tracy Beleski and PSC Group Chairman Tony Armstrong



PSC Group Chairman Tony Armstrong and Simon Oliver

PSC Welcomes New Staff

PSC welcomes new staff, and is continuing its recruitment of industry leading people to meet the growing demand for services in the specialist areas that we support.

Ahsan Siddique

Ahsan Siddique has joined PSC Australia as a Principal Transmission Lines Engineer. He has been responsible for designing and supporting the development of transmission lines and substations in Bangladesh and Australia, and has often been the leader in civil and structural engineering on these projects. His most recent project was leading the transmission line design with PLS CADD and PLS Tower modelling and the full range of foundation design for two large scale 330kV transmission line projects in Western Australia. Ahsan will be based in our PSC office in Adelaide.



Andrin Muenger

Andrin Muenger has joined PSC Australia as an Electrical Engineer. He is an experienced power system analysis engineer including expertise in load flow and dynamic simulations. He is also a specialist in hydroelectric power station modelling. Andrin has a Bachelor of Science in Electrical Engineering from Bern University of Applied Sciences, Switzerland. He has also participated in voltage stability planning and harmonic studies courses while working in New Zealand. Andrin will be part of the PSC Electrical Engineering team to be based in Perth.



Daniel Carrick

Daniel Carrick has joined PSC Australia as a Network & Security Engineer and has over 15 years experience in the IT and Telecommunication industries. Daniel started his career as a communication technician in the Australian Army and in 2005, moved in to the IT industry and has spent the last 7 years providing network and security design, implementation, operations and maintenance for clients in Australia. Daniel will be based in the PSC IT & Telecommunications group in our Adelaide office.



James Conroy

James Conroy has joined PSC Australia as a Power Systems Engineer. He has a Ph.D in electrical engineering from University College Dublin, where his research focused on wind turbine fault ride-through and inertial response capabilities. He has previously worked in the Operations Studies Group of the Irish TSO EirGrid. His responsibilities in EirGrid included studies of power system harmonics, electromagnetic transients, critical clearance times for combined cycle gas turbine (CCGT) plant and fault ride-through capability of wind farms. James has gained extensive knowledge in DigSILENT PowerFactory, PSS/E, Matlab/Simulink and DSATools, and will be supporting our clients in Australia.



Malcolm Scott

Malcolm Scott has joined PSC Australia as Business Development Manager. He has over 20 years' experience in Sales and Marketing in a technology setting with a customer focus on the Electricity and Utility Sectors. Malcolm has encompassed a broad range of roles in NZ and Australia ranging from a Field Technician to Account Management through to Sales and Marketing Management roles. Malcolm will be responsible for the business development of PSC throughout Australia and New Zealand, and will be based in the PSC Melbourne office.



Tim Hood

Tim Hood has joined PSC Australia as a Telecommunications Consultant and has over 30 years experience in the electrical power industry as a telecommunications and SCADA technician. He has spent the last 5 years as a technician with United Group in Hamilton working on the installation and maintenance of telecommunications and SCADA equipment used by Transpower in New Zealand. Tim will be based in the PSC IT & Telecommunications group in Adelaide.

