



Specialist Consultants
to the Electricity Industry

PSC NEWS

News and Views from the team at PSC

Issue 36 | November 2013

Real-Time Dispatch Engine Project for System Management

The introduction of new competitive intraday markets for Balancing and Load Following Ancillary Services added considerable complexity to the dispatch processes in the generation control room at System Management. This complexity, coupled with the need to ensure compliance to market rules under far tighter dispatch timeframes, led to the need for an automated "near real-time" dispatch solution.

In 2012, PSC were engaged by System Management to develop the Real-Time Dispatch Engine (RTDE), a custom designed and built energy software solution to calculate dispatch plans and issue dispatch instructions for the efficient and secure dispatch of short-term balancing energy generation in the South-West Interconnected System (SWIS) of Western Australia.

Due to commitments made to industry on project timeframes, RTDE was implemented to an extremely tight schedule and a fixed deadline. These constraints, coupled with the need to adapt the systems as requirements were "fleshed-out", required close team collaboration and a flexible development approach.

PSC were involved in many aspects of the RTDE project, including application architecture, analysis, design, development, implementation and post implementation support. The successful implementation of the RTDE has greatly simplified the execution of the balancing and load following market dispatch, providing the generation control room with the tools to respond to real-time events in a flexible, repeatable and compliant manner. This project is considered one of the successes of the overall market program.

Gordon Kane, Senior Control Room Operator for System Management said "It's hard to quantify the true abilities and on-going flexibility which was built into the RTDE design. It is one of the first software applications I've come across with these attributes."

PSC would like to thank and congratulate System Management for their support on the RTDE project, in particular Gordon Kane, Clayton James and Jim Vella for their hard work and dedication.

ALSO IN THIS ISSUE:

Page 2

- PSC Assisting Grant County Public Utilities District with Balancing Authority Improvements

- Siemens EMS Project Support

Page 3

- PSC is Diamond Sponsor for CIGRÉ Canada Conference

- Melbourne Client Function/SCADA reunion – 2013 and back in 1996!

Page 4

- PSC Welcomes New Staff

- PSC Scholarship for 2013

- PSC North America Opens New Westborough Office

PSC NEW ZEALAND

Phone: +64-4-232 7680
Fax: +64-4-232 7682

PSC AUSTRALIA

Phone: +61 1300 933 632
Fax: +61-7-3252 8640

PSC USA

Phone: +1-425-822 8489
Fax: +1-425-822 3520

PSC ASIA

Phone: +65-9128 1830



Todd Becker (PSC), Neil Hay (System Management, Power System & Market Operations Manager) and John Moore (System Management, Senior Systems Operations Controller).

PSC Assisting Grant County Public Utilities District with Balancing Authority Improvements

PSC North America is providing Project Management and technical expertise in support of the Grant County Balancing Authority function within the Western Electricity Coordinating Council (WECC). Grant County Public Utility District (PUD) services over 47,000 customers in rural, and primarily agricultural central Washington State. Based in Ephrata, Grant PUD provides power across the county establishing itself as a driving force in an agricultural economy.

The utility owns and operates the Priest Rapids Project on the Columbia River, comprised of Priest Rapids and Wanapum dams producing 2,000 megawatts of clean and renewable electricity. Sharing this electric power with 23 Northwest utilities serving

millions of customers, Grant PUD is responsible for the Balancing Authority function as well as scheduling of the Mid-Columbia river projects – 7 hydroelectric dams in total. PSC's project management and technical consultants are assisting with improvements to the Balancing Authority functions for Grant PUD.

PSC's project manager is Randy Berry and is working closely with Marc DeNarie who is the PSC technical lead. Brad Nelson of PSC is providing expert consulting in the area of generation and control area modelling. Jack Homeyer is assisting with display and database modifications. In addition to Balancing Authority improvements, PSC has been working with Grant PUD on assessment

and implementation of Dispatcher Training Simulator (DTS) updates.

According to Randy Berry, "Grant PUD is a great customer. Their team of professionals is highly skilled, and they are industry leaders." To be involved in a project of this importance is exciting and challenging. The PSC Team thanks Grant PUD for their confidence, support and trust in PSC. We look forward to the improvements and working with Grant PUD as a valued customer in the future. For more information, please contact Robin Lane, PSC's Administration Manager at robin.lane@pscconsulting.com

Siemens EMS Project Support

Siemens Smart Grid Division belongs to the Cities and Infrastructure Sector of Siemens Industry Inc. and forms part of the U.S. company of Siemens AG, a global powerhouse in electronics and electrical engineering.

PSC has been very successful working with multiple vendors' technology and

we have an excellent relationship with Siemens in the United States where they are a valued PSC North America client. PSC service delivery has been mainly in the support of Siemens' Spectrum Power 3, Power 4 and Power TG technology for Energy Management Systems in the energy sector and includes system

integration and testing, application customization and technical support.

During a recent client visit in New Zealand, senior Siemens management met with PSC at our Wellington office to discuss business opportunities in Australia and New Zealand.



Steve Wooderson – Siemens NZ Executive Manager, Ross Gaspard – PSC NZ Control & Market Systems Manager, Alex Boyd – PSC North America CEO, Randy Horn – Siemens Director Smart Grid Energy Automation Solutions, Chip Williams – Siemens Power TG Product Manager, Tony Armstrong – PSC Group Chairman and Co-founder

PSC is Diamond Sponsor for CIGRÉ Canada Conference

PSC is proud to have been one of the diamond sponsors, along with ABB and Schneider Electric, for the 2013 CIGRÉ Canada conference that was held in Calgary. This year's conference focused on "Modernizing the Grid to Better Serve Evolving Customer Needs" which is close to the heart of PSC as we focus on providing technology services to all our utility and vendor customers. Alex Boyd, PSC North America's CEO enjoyed the opportunity to present the modernization of the grid from a human factors perspective to all the conference attendees.



PSC North America CEO Alex Boyd presents at the CIGRÉ Canada Conference

Les Brand, PSC's global HVDC leader, was pleased to have co-written with Carly Duerr of AltaLink, a paper on Planning for the Integration of HVDC Facilities which Carly presented at the conference. The paper focused on the Western Alberta Transmission Line

(WATL), AltaLink's HVDC link currently under construction. We would like to thank Carly for presenting and AltaLink for hosting this year's conference.

As part of our commitment to continuous staff development and information sharing within the electricity

industry, PSC maintains a very active role in CIGRÉ (International Council on Large Electric Systems) and we look forward to ongoing interaction with the industry through CIGRÉ and other industry events.

Melbourne Client Function/SCADA reunion – 2013 and back in 1996!

A recent industry function was a reunion of SCADA/EMS technologists in the Victorian power industry representing more than 20 years' experience individually and 200 years collectively spanning L&N, Siemens and Alstom technology.

The 2013 photo has 10 people who have all worked together in the same company and who have all worked for Andrew Dunn at some time.

L – R: Peter Stevens, Martin Strong, Andrew Dunn, Peter Kibell, Terry Day, Doug Pedler, Glenn Hoggan, David Bartolo, John Blakeney, Fred Dykman



2013 SCADA Reunion

The second photo was taken in 1996 in what was at the time the VPX Control Centre in Richmond. Seven people in the 1996 photo (which was taken by Andrew Dunn) are in the 2013 photo along with operator Robin Helmond at the console. All started in the State Electricity Commission of Victoria (SECV) but over the years have worked for some of the following: SECV, National Electricity, Victorian Power Exchange (VPX), PowerNet (including GPU, SPI and SP AusNet), NEMMCO, AEMO and Alstom.



VPX Control Centre 1996

What's changed? Back then we mostly wore ties!!

PSC Welcomes New Staff

Jed Leighfield

Jed Leighfield has joined PSC North America as a Senior HVDC consultant. He holds a Bachelor of Science degree in Electrical Engineering Technology, and has over 23 years' experience in electrical engineering and 12 years as an HVDC engineer. He was most recently involved with engineering, design, construction, and operations technical support to several High Voltage Direct Current transmission development projects in North America with Cross Sound Cable/TransEnergie U.S. Jed will be based in PSC's new Westborough, Massachusetts office with Brad Railing and John Miller. He will be assisting in the growth of the PSC North America HVDC business.



Kenneth Choy

Kenneth Choy has joined PSC Australia and is an experienced SCADA and Electrical Engineer. He has worked in the process control arena for 10 years and gained solid technical experiences from various positions including Electrical Engineer, Software Engineer, Project Engineer and Support Engineer. This experience has covered a broad range of areas from detailed design and commissioning of substation control system equipment to RTU configuration. Kenneth is also experienced in SCADA development, configuration and modelling. He is based in Sydney and his initial assignment is to assist with Site Acceptance Testing (SAT) for an EMS and SCADA system.



PSC Scholarship for 2013

PSC is pleased to continue its association with the University of Canterbury, School of Engineering with the annual award of the PSC Scholarship.

The PSC Scholarship was established in 2004 as a co-operation between PSC and the Electric Power Engineering Centre (EPECentre) to promote and support the education of power engineers and the study of power engineering as a field of excellence in New Zealand. The scholarship is open to students in their 3rd professional year, who are focusing on power engineering subjects and have demonstrated excellence in their studies.

The successful candidate this year was selected from a very strong field of submissions and our congratulations go to Darren O'Neill who has shown outstanding academic performance combined with a strong focus on practical work experience which currently includes undertaking a project to model and simulate Tonga's power system.



PSC Scholarship Recipient Darren O'Neill and EEA Executive Director Peter Berry

We wish Darren and all the candidates every success in their pursuit of a rewarding career in the power industry.

PSC North America Opens New Westborough Office

As PSC North America experiences growth in demand for our HVDC services, we have opened a new office in Westborough, Massachusetts. On the east coast of the United States, a 45-minute drive (approximately 30 miles) west of Boston, you will find the newest PSC North America office in the New England town of Westborough, MA.

By the end of October, the office space will be outfitted for permanent staff including Principal HVDC Consultants Brad Railing and John Miller, and their newest staff addition, Senior HVDC Consultant Jed Leighfield. There will be additional space available for visiting staff and clients. This powerful team brings extensive experience in HVDC projects ranging from

technical feasibility studies, conceptual design, technical specifications, field testing and commissioning, project management, operations and maintenance.