

Conference Programme

EEA CONFERENCE

SkyCity Convention Centre
Auckland, New Zealand
18-20 June 2014



WEDNESDAY, 18 JUNE 2014

12.00pm TRADE EXHIBITION OPENING - LUNCH
AUCKLAND 3 & 4

1.00pm **Bob Simpson**
EEA President

1.10pm **Hon Simon Bridges**
Minister of Energy

2.00pm **Dave Openshaw - IET (UK)**
How Britain's Electricity Industry is meeting the challenge of delivering low carbon transition.

2.45pm **Erich Gunther - IEEE (PES)**
A Road Map for Evolving our Electric Energy Ecosystem.

3.30pm AFTERNOON TEA

	AUCKLAND 1	AUCKLAND 2	AUCKLAND 3	AUCKLAND 4	EPSOM 2
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	PROJECTS - TRANSMISSION	ASSET MGMNT - TRANSFORMERS	ASSET MGMNT - STRATEGY	HEALTH & SAFETY	ASSET PROTECTION
4.00pm	Wairau Road 220kV/33kV Grid Exit Point: The Challenges of Building a new Urban Substation Brett Stark, Transpower NZ Ltd & Kevin Morris, AECOM	An Asset Manager's approach to service aged Resin Bonded Paper (RBP) 220kV Bushings: Manapouri Power Station. Li Ing Peh, Meridian Energy Ltd & Wade Enright, Viva	Asset Risk Management - A Key Asset Management Tool. Peter Griffiths, Transpower NZ Ltd	The New H&S At Work Act - What it may mean for the ESI. Harvey O'Sullivan, Harvey O'Sullivan Consulting Ltd	Comprehensive Assessment of Fault Clearance Times and Grading Margins in Power Distribution Systems. Sheldon Lin & Mary Zhang, University of Auckland
4.30pm	Protection of 220kV 50 MVar Shunt Reactor at Transpower's Wairau Rd Substation. Rebecca Shaw, AECOM Ltd	Understanding Power Transformer Core Magnetism and Reducing Inrush Currents. Rowan Sinton, Pringle Beleski & Associates Ltd	Improving Works Delivery within an Electricity Distribution Business. Nathan Cammock, Unison Contracting Services Ltd	Equipotential Zones (EPZ) - Lessons Learnt. Robert Orange, Mitton Electronet Ltd	Wellington's Trolley Bus Overhead Electrical Network - Introduction of Electrical Fault Protection. Simon Fleisher, Wellington Cable Car Ltd & Steve Read, Protection Consulting
5.00pm	NZ Inter Island HVDC Pole 3 Project Completion. Richard Sherry, Transpower NZ Ltd	Dry-type Transformers for the Sub-transmission Voltage Level. Martin Carlen, ABB Switzerland Ltd	Building Capacity to Deliver for Customers. (EESA NSW Conway Prize Paper 2013) Ty Christopher, Endeavour Energy	Safety by Design for Electricity Distributors. Johan Hendriks, Alpine Energy Ltd	An Alternative Approach to Earth Fault Protection on Remote Rural Feeders – AMI can reduce Bushfires Conrad Holland, SMEC NZ Ltd

5:30-7.00pm TRADE EXHIBITION SOCIAL HOUR

7:00pm EEA ANNUAL GENERAL MEETING, EPSOM 2

THURSDAY, 19 JUNE 2014					
DAY 2	AUCKLAND 1	AUCKLAND 2	AUCKLAND 3	AUCKLAND 4	EPSOM 2
	SMART GRIDS	TRAINING & EDUCATION	ASSET MGMT - OVERHEAD LINES	GRID MANAGEMENT	DEMAND RESPONSE
8:30am	Chorus' Ultra-Fast Broadband Rollout. Ed Beattie, Chorus	Who's abdicating their training responsibility this year? The learner, the provider or the employer? Kate Duggan & Gordan Pelsler, Transpower NZ Ltd	Producing Robust Forecasts of Replacement Expenditure - Overhead Line Pole Assets. Karen Frew, Powerco Ltd	System Frequency Needs - Meeting Tomorrow's Power. Gillian Rodger, Transpower NZ Ltd	Systems to Implement Demand Response in New Zealand. Richard Strahan, EPECentre, University of Canterbury
9am	IEC 61850 for Non-IEC 61850 Persons by a Non-IEC 61850 Person. Johann Myburgh, Vector Ltd	Zen and the Art of Engineering Education. Shreejan Pandey, EPECentre, University of Canterbury	Acoustic Survey of Overhead Electricity Networks. Goran Stojadinovic, Northpower Ltd & Michael-John Parkin, Vector Ltd	AutoSynch - Restoring the National Grid after Major Disruption. Andrew Page, BECA Ltd	Understanding the market impact of Demand Response. Siobhan Procter, Transpower NZ Ltd
9.30am	From Old Grid to Smart Grid: Making the Business Case for a Self-Healing Grid. Chris Wering, S&C Electric Company	Establishing and Maintaining Workforce Competency. Phil Macquarie, Industry Skills Ltd	The Palmerston Paradox: Downgrading Assets to Upgrade the Network. Bevan Cooper, OtagoNet & PowerNet Ltd	More Transmission Statcoms. Daniel Crawshay, Transpower NZ Ltd	Investigating the Potential of Residential Thermostatically Controlled Loads for Fast Demand Response. Hatem Alzaanin, Victoria University of Wellington
10am	Frequency-based Protection Schemes used to realise Load Management in Modern Substation Automation Systems. Rui Ding, Vector Ltd	Interactions of Participants in Online Engineer's Forum Reflect Emerging and Relevant Power Industry Trends. Jane A Hutt, International Generator Technical Community	Practical Experience on Dynamic Rating Implementation in Distribution Networks to Improve Asset Utilisation. Nu'man Rashid, Unison Networks Ltd	How Interruptible Load Keeps the Lights On. Heidi Heath, Transpower NZ Ltd	Taking a Lead in Ancillary Services Markets. Stephen Drew, EnerNOC & Todd Sankey, ENBALA Power Networks, Canada
10.30am	MORNING TEA		AUCKLAND 3 & 4		
			KEYNOTE SPEAKERS		
11am			Terry Krieg, CIGRE International trends and challenges in Asset Management		
11.45am			Rod Oram, International Business Journalist Making our future: the energy's sector's role in NZ economic transformation		
12.30pm	LUNCH				
	ASSET SAFETY	POWER QUALITY	GENERATION & GRIDS	ASSET MGMT	PROJECTS - TRANSMISSION
2pm	Developing a remote actuator to address switching concerns on oil-filled switchgear. Michael-John Parkin & Jonathan Bishop, Vector Ltd	Power Quality Management. Neville Watson, University of Canterbury	Automatic generation run-up to increase transmission capacity - a case study and lessons for the future. Alex Joosten & Dominic O'Grady, Transpower NZ Ltd & Jason Marshall, Meridian Energy	Improved Substation Design at lower cost with SF6 free Disconnecting Circuit Breakers. Martin Magnusson, ABB Ltd	Design of New 500kV Line in a Challenging Environment. Arun Arora, AECOM Ltd
2:30pm	Requirements and Experience of Practical Secure Access Control and Management of Intelligent Systems. Rodney Hughes, Siemens Australia	Understanding Network Quality Requirements and Customer's Views on Planned Outages. Mathew Ogier, Powerco Ltd	Geothermal Power Station Model Development for Grid Compliance Study. Amir Mehrtash, Jacobs SKM	Measurement of Electricity Distribution Overhead Wire Tension. Carl Rathbone, OtagoNet Ltd	Risk Analysis for World Cups 2015 Lekshmi Mohan, Transpower NZ Ltd
3.00pm	Managing Electrical Interference Hazards on Metal Gas Pipeline Networks in New Zealand. Rodney Urban, AECOM NZ Ltd	Building Measurement Capability for Tomorrow. Keith Jones & Tom Stewart, MSL, Callaghan Innovation	Multiple Frequency Keeping Julien Arts, Contact Energy	Partial Discharge De-noising and Localisation Algorithm Using Double-sided Measurement and its implementation. Jichao Chen, University of Auckland	NAaN Grid Upgrade Project: Delivering a Major Transmission Upgrade through a busy Metropolitan City. Mark Ryall & Shaun Frazerhurst, Transpower NZ Ltd

DAY 2 CONTINUED					
THURSDAY, 19 JUNE 2014					
3:30pm	AFTERNOON TEA				
DAY 2	AUCKLAND 1	AUCKLAND 2	AUCKLAND 3	AUCKLAND 4	EPSOM 2
	ASSET SAFETY	ASSET MANAGEMENT	ASSET MGMNT - GENERATION	HEALTH & SAFETY	PROJECTS - TRANSMISSION
4pm	Implementation of a Tactical Asset Management Plan for existing Transmission Assets. Tom Middleton, Transpower NZ Ltd	Drivers of Energy Usage in the 21st Century. (EESA NSW Cresswell Prize Paper 2013) Robert Smith, Ausgrid	Wairere G5 - A Partnership in Plant Upgrades. Paul Vaughan, Mitton ElectroNet Ltd	The Role of Human Factors in Identifying Incident Causal Factors in New Zealand's Energy Sector. Ray Basher & Ken Papps, Igniter Ltd	Sorting out the Wires in Myanmar. Michael Breckon, SMEC NZ Ltd
4.30pm	Reducing Copper Theft in the Utility Industry. Brenton Williams, ERICO International	Designing a Transparent Load Forecasting Methodology. Peter Armstrong & Eric Pellicer, Powerco Ltd	Waitaki Hydro Power Station Refurbishment. Malcolm Preston, Meridian Energy	Trainee Pre Selection. Graeme Johnson, Electrix Ltd	Temporary 220kV Line Maintains Security of Supply for the Wairakei Ring Upgrade. Robin Stewart, Beca Ltd
5pm	Innovating for Electrical Distribution Asset Management, Asset Protection and Safety. Gaz Maroof & Jason Hazelwood, Counties Power Ltd	Comparing Electricity Distribution Businesses. Patrick Hyland, Hyland McQueen Ltd	Verified Protection Relay Models - A Concept for Comprehensive Settings Management and Analysis Brad Henderson, DigSilent Pacific	Safety & Health Performance Indications for the Electricity Supply Industry. Bernard Healy, EEA	Live Line OPGW Replacement in an Urban Environment. Rex Inger, Beca Ltd
5.30 - 6.30pm	TRADE EXHIBITION SOCIAL HOUR				
7.30pm	PRE-DINNER DRINKS				
8pm	CONFERENCE DINNER				

FRIDAY, 20 JUNE 2014					
DAY 3	AUCKLAND 1		AUCKLAND 2		AUCKLAND 3 & 4
8.30am					<p>Alison Andrew, CEO, Transpower NZ Ltd Where to for Transmission?</p>
9.15am					<p>Doug Wilson, ENA (UK) Powering Improvement - Health & Safety Matters...</p>
10.00am	MORNING TEA				
	AUCKLAND 3		AUCKLAND 4		
	GRID MANAGEMENT	DISTRIBUTED GENERATION - PV	ASSET MGMT - TRANSFORMERS	ASSET MANAGEMENT	DISTRIBUTED GENERATION
10.30am	<p>Real-time Dynamic Security Assessment for the New Zealand Transmission Grid. Anna Li, Transpower NZ Ltd</p>	<p>Photovoltaic Solar Power Uptake in New Zealand. Allan Miller, EPECentre, University of Canterbury</p>	<p>Experience Gained from Oil Reclamation Experiments to remove Dibenzyl Disulphide in Manapouri Transformers Oil. Li Ing Peh, Meridian Energy Ltd</p>	<p>Planning Network Investment in a Smart Low Carbon World. Paul Blackmore, EA Technology</p>	<p>Electric Vehicles in Australia - An Owners Perspective. Christopher Dalitz, Essential Energy</p>
11.00am	<p>A Technical Overview of Wilton Substation 33kV Outdoor to Indoor Conversion. Kieran Kennedy, Mitton Electronet Ltd</p>	<p>Clean Development Mechanism Projects for Developing Countries: Potential for Carbon Emissions Mitigation and Sustainable Development. Daniel Akinyele, Victoria University of Wellington</p>	<p>Transformer Maintenance - Do Transformer Windings need Reclamping? Ross Willoughby, Alstom Grid</p>	<p>Relocation of Disaster Recovery (DR) Facility. Alan Harrop, WEL Networks</p>	<p>Availability and Network Impacts of Battery Electric Vehicles used for Peak Shaving. Ian Mason, University of Canterbury</p>
11:30am	<p>Automatic Under-Frequency Load Shedding (AUFLS) Current and Proposed Scheme: Risk Assessment of Over-trip and Possible Mitigations. Daniel De Somma, Transpower NZ Ltd</p>	<p>Review of Distributed Generation Interconnection Standards. Luke Schwartzfeger, EPECentre, University of Canterbury</p>	<p>Monitoring of a Distribution Transformer at Winchelsea Substation. Alan McGuigan, OMICRON Electronics Australia</p>	<p>De-risking the LV Network: Investing in assets today that won't cost the earth tomorrow. Tim Duguid, Hamer Ltd</p>	<p>Low Voltage Network Modelling. Jeremy Watson & Neville Watson, University of Canterbury</p>
12.00pm	<p>Transpower HVDC Bipole - Transmission to Trading Chris Otton, Transpower NZ Ltd</p>	<p>Energy Storage and Micro-grids Case Study - Santa Rita Jail. Owen Lock, S&C Electric Company</p>	<p>Power Transformers in New Zealand: A Review of Current Fleet Age, Asset Management Strategies and Procurement Practices. Ami Singh, Genesis Energy</p>	<p>Advances in Remote Semi-autonomous Monitoring (Utilising Drones, UAV & Robotics to inspect assets, substations & power lines) Kristian Jensen, Norman Disney & Young</p>	<p>Developing a simulation model of a possible large pumped energy storage in the South Island to support a renewable electricity goal in New Zealand. Mohammed Majeed, University of Waikato</p>
12.30pm	LUNCH				
			AUCKLAND 3 & 4		
			PANEL SESSION		
2pm			<p>"Improving Safety Through Partnerships" Session Convenor - Bob Taylor - (EEA Safety Strategy & Policy Group) Doug Wilson - (ENA UK) Gordon MacDonald - Chief Executive, WorkSafe NZ Ken Sutherland - CEO, Unison Networks Fritz Drissner - National Health & Safety Officer, EPMU Steve Webster - GM Electrical Services, Transfield Services NZ</p>		
3:30pm	BEST PAPER AWARD - HELD IN AUCKLAND 3&4				
4pm	CLOSE OF CONFERENCE - HELD IN AUCKLAND 3&4				