

Conference Programme - 20 July 2021



MONDAY, 2 AUGUST 2021

1.00pm - 4.00pm	SITE TOURS - MEET TRANSPORT AT TSB ARENA	
MASTERCLASSES - LOCATED IN WELLINGTON MUSEUM		
VON KOHORN ROOM		DRAUGHTSMANS ROOM
1.00pm	GRID CONNECTED SOLAR	TIMBER POLE CONDITION ASSESSMENT
4.45pm - 5.30pm	ANNUAL GENERAL MEETING, Room 1, Shed 6	
5.30pm - 7.30pm	TRADE EXHIBITION OPENING AND SOCIAL FUNCTION, TSB Arena	

TUESDAY, 3 AUGUST 2021

8.30am	REGISTRATION & TRADE EXHIBITION OPENS			
ROOMS 2 TO 4				
9.30am	CONFERENCE OPENING			
9.35am	Jo Hendy, Chief Executive, Climate Change Commission			
10.10am	Nigel Barbour, Chief Executive, Orion NZ Ltd			
10.45am	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	CARBON ZERO	SMART TECHNOLOGY	FUTURE GRIDS	PANEL SESSION
11.00am	Architecture of the Future Low-Carbon, Resilient, Electrical Power System. Dr. Radnya Mukhedkar, University of Canterbury	ConductorDown – A groundbreaking safety solution for overhead distribution networks. Rodger Griffiths, Electronet Technology	New approaches to network planning. Richard Kingsford, WEL Networks	'Protection and Automation' - System Restoration Challenges CIGRE Panel and Workshop Session
11.30am	Perverse incentives creating an impact on network performance and New Zealand's zero carbon future. Dougal McQueen, Aurora Energy & Aleida Powell, University of Otago	Death to the Hard-Wired Signal: The rise of IEC61850 Communications Nathan Rich, Connetics Ltd	Lessons learned during the Australian transformation towards renewable generation through a prism of New Zealand power systems analysis engineer Alexander Apukov, Mitton Electronet	<u>Workshop Presenter:</u> Dr. Nirmal Nair , University of Auckland/ WG B5.54 Convenor <u>Panellists:</u> Bernadette Robertson , Transpower John Bartley , Transpower Kiran Nanu , Contact Energy Stephen Chiu , Powerco
12.00pm	The effects on the wider electricity network of heating decarbonisation projects. Campbell Rae, Connetics Ltd	Enhancing rating studies through soil digital twin. Nu'man Rashid, Unison Networks Ltd	Meeting the Peaks: New Zealand Generation Balance Anjana Madurapperuma, Transpower NZ Ltd	
12.30pm	LUNCH IN TRADE EXHIBITION AREA			

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DAY 1 CONTINUED

TUESDAY, 3 AUGUST 2021

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	ASSET MANAGEMENT INNOVATION	FUTURE ENERGY SECURITY	INNOVATIVE TECHNOLOGY	SMART TECHNOLOGY
1.30pm	Rethinking test data and reporting. An Introduction to our common data environment for improving electrical safety. Patrick Coombe, Mitton Electronet	Electricity network infrastructure resilience through the lens of seismicity. Nirmal Nair, University of Auckland	Implementation of Whangamata's standby battery energy storage system - lessons learned. Eric Wolters, Powerco	Analysis of an Intelligent Merging Unit Based on IEC 61850-9-2. Parsa Zakeri, EEA APEX winner / Beca
2:00pm	Implementation of a new asset condition and risk modelling methodology at The Lines Company. Geoff Tait, The Lines Company	Can ABC and CCT systems improve the reliability and resilience of LV/MV OH networks in New Zealand? Goran Stojadinovic, TransNet NZ Ltd	Speed is of the essence – A case study of developing New Zealand's Waipipi windfarm. Tom Glover, Mitton Electronet & Jim Pearson, TILT Renewables Ltd	Feeder automation: A provincial case study. David Klein Ovink, Horizon Networks
2.30pm	Helicopters flying near HV lines earthing safety – A case study. Philip Boys, Mitton Electronet & Mike Taylor, Taylor Consultants (2006) Ltd	TPR envision: Making transmission planning visual and interactive. Sujata Roy & Valarmathy Dornan, Transpower NZ Ltd	A paradigm shift in underground cable asset management: To achieve better life-cycle management and reliability. Vikram Sen & Richard Kingsford, WEL Networks	Monitoring and detection of low-current/high-impedance faults in distribution networks. Dr. Fiona Stevens McFadden & Anwarul Sifat, Robinson Research Institute (Victoria University of Wellington)
3.00pm	Implementing Mainpower's advanced distribution management system. Hamish Cumming, Mainpower	Solar tsunamis: Space weather prediction and risk mitigation for New Zealand's energy infrastructure. Andrew Laphorn, University of Canterbury	Contemporary Galápagos Finches – Harmonic Filter Design using Evolutionary Algorithms. Brad Henderson, Mitton Electronet	Is your protection relay trying to tell you something? David Harper, AECOM NZ

3.30pm AFTERNOON TEA

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	ASSET MANAGEMENT INNOVATION	ASSET REPLACEMENT	FUTURE GRID	OUR PEOPLE
4pm	Vegetation risk framework & management system: Development and application. Johnathon Green, Horizon Networks	Overhead copper conductors, their condition and risk-based replacement. Mitch Graham, Unison Networks Ltd	A (Geo) graphical tool for overhead network renewal planning. Kenneth Pattie, Andrea Gallieueg & David Haberkorn, Powerco	The future of electrical worker licensing and competence. Mel Orange, Electrical Workers Registration Board
4.30pm	Meaningful measurement matrixes – good data, better reporting tools used to measure vegetation data. Sam Glenn, Delta Utilities Ltd	Detection of rebar corrosion in concrete power poles. Joseph Bailey, Victoria University of Wellington	Putting the smarts in scalable customer restoration. Joshua Moore, Counties Power	Empowering those who will shape the New Zealand's energy future. Dr. Nikki Newham, Transpower NZ Ltd
5pm	Geospatial modelling of overhead distribution conductor condition and risk using the DNO common methodology framework. Waseem Awan & Kenneth Pattie, Powerco	Network Tasman reinforced concrete pole life assessment. Murray Hendrickson, Network Tasman	Commercial Rooftop Solar Viability Allan Miller, Allan Miller Consulting Ltd & Gareth Gretton, Energy Efficiency & Conservation Authority (EECA)	Look up and live – Powerline safety. Glen Cook, Electrical Safety Consulting

5.30 - 7.00pm SOCIAL FUNCTION HELD IN TRADE EXHIBITION - SPONSORED BY ORION NZ LTD

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WEDNESDAY, 4 AUGUST 2021				WELLINGTON MUSEUM
	ROOM 2	ROOM 3	ROOM 4	VON KOHORN ROOM
	DISTRIBUTED GENERATION	SMART TECHNOLOGY	GREEN ENERGY	ASSET ENHANCEMENTS
8.30AM	Geo-Spatial Modelling of MV Cable Layout and Novel Moisture Testing Techniques for HV Cable. Ebad Rehman, University of Auckland	Efficient electrification with Ga2O3 - a robust ultra-wide bandgap semiconductor Dr. Radnya Mukhedkar, Dr. Bill Heffernan & Prof. Martin Allen, University of Canterbury	The dawn of utility scale solar in New Zealand. Campbell McMath, Kea Energy Ltd	Dry your tears and your hydro generator: recovering from disaster. Campbell Hammond & Rowan Sinton, Edison Consulting Group
9.00am	KASM Project at UK Power networks for facilitating renewable energy integration via real-time contingency analysis implementation. Graeme Ancell, Ancell Consulting & Gilbert Chiang, Bigwood Systems	Laser, EMF and camera monitoring of a transmission line span to observe and analyse the swing of different conductor types. Robert Lake, PSC NZ Ltd	Prioritising the protection philosophy elements of speed, selectivity, sensitivity, dependability and security in MV and HV networks. Martin Slabbert, Mitton Electronet	Bunnythorpe to Haywards reconductoring project. Helen Gilbert & Ben Evans, Beca
9.30am	Grid auto-reclose and embedded generation: end to end co-ordination challenges to improve system availability and integrity. Peter Bishop, Transpower NZ Ltd	Improved method for energy reconciliation using smart meter data event analytics. Leonie Bule, University of Auckland	Design and construction of the Azura wave energy converter. Efim Sturov, EHL Group	Clyde 220 kV CB508 replacement and enabling works. Kerry Jenkins & Tiantian Xiao, Beca
10.00am	A new era of innovation in the power system Eric Pyle & Gareth Williams, Solarcity	Analytics and risk-based decision making Claire Picking, Counties Power	Reinjection as a solution to greenhouse gas emissions for high emitting geothermal power-plants in New Zealand. Anu Choudhary, Victoria University of Wellington	Challenges and lessons learnt from the design-build of NZ's largest single hospital project. Winton Buchanan & Kirill Kudinov, Connetics Ltd
10:30am	MORNING TEA IN ROOM 1			
	ROOMS 2 TO 4			
11.00am	Vince Hawkworth, Chief Executive, Mercury NZ Ltd			
11.35am	Alison Andrew, Chief Executive, Transpower			
12.10pm	Peter Brown, General Manager, Power System Consulting NZ Ltd			
12.40pm	LUNCH IN ROOM 1			
	ROOM 2	ROOM 3	ROOM 4	WELLINGTON MUSEUM
	DISTRIBUTED GENERATION	DISTRIBUTED GENERATION	PANEL SESSION	VON KOHORN ROOM
	DISTRIBUTED GENERATION	DISTRIBUTED GENERATION	PANEL SESSION	CARBON ZERO
2.10pm	Modelling the hosting capacity of Orion's low voltage network for EV charging. Dr. Sharee McNab, EPECentre, University of Canterbury & Yuyin Kueh, Orion NZ Ltd	How low carbon technologies will affect the usage of transformers, and how the utility should respond. Dan Martin, ETEL	'The Engineering Capability Challenge' Panel Chair: Michael Whaley, Powerco Ltd	Sustainable transmission line designs in to reduce concrete consumption. Craig Oliveira, EEA APEX winner/ Beca
2.40pm	BYO DER or network? Identifying optimal trade-offs between distributed energy resource build and distribution network augmentation through integrated resource planning Brian Moore, Ernst & Young	Powerco LV grid visibility and monitoring. Jesse Malone, MV Technology Solutions Pty & Phil Marsh, Powerco	Panel Members: Robert Ferris, Electrix Ltd Brad Rooney, Mitton Electronet Mike Grumball, Connexis Andrew Renton, Transpower Rob Heys, Infometrics	Electrification of dairy processing – Insights, innovation and impact. Glenn Sullivan, Fonterra
3.10pm	A case study of an innovation ecosystem: Waipa Networks, the Lakewood development and St Kilda subdivision. Peter Armstrong, Waipa Networks	Communications Technologies and Systems to Implement Coordinated, Aggregator-Mediated Demand Response in New Zealand. Soheil Mohseni, Victoria University of Wellington		Carbon zero: the dream and the reality. Bryan Leyland, Leyland Consultants
3:40pm	CLOSE OF CONFERENCE IN ROOM 4			