

Conference Programme - 30 Aug 2022



MONDAY, 19 SEPT 2022

1.00pm - 4.00pm **SITE TOURS - MEET TRANSPORT AT CLAUDELANDS - HUNTLY POWER STATION & TE UKU WINDFARM**

MASTERCLASS - CLAUDELANDS, 1ST FLOOR

ARENA LOUNGE

1.00pm **ASSET HEALTH & RISK MODELLING**

Presenter: Dr. Paul Blackmore, Agila Solutions
(registrations required via the EEA Website)

4.45pm - 5.30pm **Pre-Conference Presentation**
Bryan Leyland, 'Power Supply: past lessons & future options'
(No registration required)

5.30pm - 7.30pm **TRADE EXHIBITION OPENING AND SOCIAL FUNCTION**

TUESDAY, 20 SEPT 2022

8.30am **REGISTRATION & TRADE EXHIBITION OPENS**

HEAPHY ROOMS 1 TO 3 - GROUND FLOOR

9.30am **CONFERENCE OPENING**

9.35am **Hon Dr. Megan Woods, Minister of Housing, Energy & Resources, Building & Construction**

9.45am **Dr. Keith Turner, Professional Director**

10.15am **Margaret Cooney, Chief Customer Officer, Octopus Energy NZ**

10.45am **MORNING TEA IN EXHIBITION - SPONSORED BY TRANSNET**

HEAPHY ROOM 1

HEAPHY ROOM 2

HEAPHY ROOM 3

BROOKLYN 1 & 2 (UPSTAIRS)

CARBON ZERO/FUTURE GRID

CIGRE PANEL SESSION

ASSET ENHANCEMENT

SMART DATA

11.00am **Peer-to-Peer Consumer Energy Transaction Support Models during High-Impact Low Probability Weather Events**
Lakshita Lakshita & Dr. Nirmal Nair, University of Auckland

Emergent Digital Substations Principles & Applications

Panel Chair: Dr. Nirmal Nair

Solar Array – A Design, Build, Deliver Success Story
Matt Gazzard, Mitton Electronet

Low Voltage Network Data Quality for Network Understanding
Dr. Allan Miller & Scott Lemon, ANSA

11.30am **Developing the transmission grid to enable net zero carbon by 2050**
Mike Parker, Transpower

Experts from Orion, Transpower, Counties Energy, and SGS will be contributing to the discussion, covering everything from the synthesis of digital substations and electrical installations with IT and OT, including cyber security, the 'why and how' of international and local applied principles and building blocks, through to threats, opportunities, and experiences.

Windsor Zone Substation -11kV Switchgear Upgrade. The story of a small building with a big heart.
Paul Humphreys, Unison Networks

Sensing for increasing resilience in the electric power industry
Hamish Avery, EPECentre, University of Canterbury

12.00pm **Bitcoin and its potential for the Aotearoa power system.**
Mike Lazelle, Todd Generation &

Karapiro Substation Upgrade Whilst Maintaining Security of Supply
Kevin Morris, AECOM

Data Driven Maintenance and Condition Monitoring
Jessica Silcock, Meridian Energy

12.30pm **LUNCH IN TRADE EXHIBITION - SPONSORED BY TRANSNET**

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DAY 1 CONTINUED

TUESDAY, 20 SEPT 2022

	HEAPHY ROOM 1	HEAPHY ROOM 2	HEAPHY ROOM 3	BROOKLYN 1 & 2 (UPSTAIRS)
	OUR PEOPLE	ASSET MANAGEMENT INNOVATION	ASSET ENHANCEMENT	ASSET ENHANCEMENT
1.30pm	Attracting Young Talent: Some Thoughts on Recruitment from a Recent Graduate Connor McCarthy, Transpower	The sweet spot: How two asset owners got full value from their 3D scan data Yanosh Irani, Meridian Energy, Kevin Harman, Genesis Energy & Mark Foster, Revisia Ltd	Natural Ester-Based Insulating Fluid - A New Norm for the Utility of the Future Kin Yu Lam, Cargill Asia Pacific Holdings (EESA Winning paper)	11kV Enclosed Switch Replacement Program: A not off the shelf solution Brian Moffat, Horizon Networks
2:00pm	The Future Electrical Engineer Registration with the Electrical Worker's Registration Board Ashley Yan, EWRB	Applying an Asset Information Maturity Model to Improve Outcomes in New Zealand's Electricity Sector Jules Congalton, Asset Dynamics Ltd	Practical Utilisation of Low Frequency Heating for Cost Effective Transformer Winding Moisture Removal Daniel Oosthuizen, Genesis Energy & John Pringle, PBA Ltd	Aurora Energy's upgrade of the original power supply to Dunedin. From 2500 poles to 550 Brian Campbell, Connetics Ltd & Scot Jefferies, Aurora Energy
2.30pm	Identifying and bridging the "Graduate Engineers practical skills gap" in the New Zealand Power Distribution Industry Luke Mainwaring, Powerco	Integrating Asset Risk Assessment with Corporate Risk Assessment and Asset Management Strategy Ying Wang, Consulink	Manapouri Power Station – Hydraulic Transient Studies for Station Overtopping Protection Design Errol Bebbington, PSC NZ Ltd	Comprehensive data collection for pole Inspections Josh Pope, Lisa Hemopo & Antony Cochrane, Orion NZ
3.00pm	HV Network Operator Training using Mixed Reality. Hels Lopez, Connetics	Asset Shake Up – Hawkes Bay Earthquake Nu'man Rashid, Unison Networks	Excitation System Replacement for Ageing Hydro and Geothermal Generators – Experiences and Implementation Considerations Generoso Paloso & Dennis Preston, AECOM	Evaluation of performance and fire response of LV plastic pillar material Andre Cuppen, Powerco

3.30pm AFTERNOON TEA IN TRADE EXHIBITION - SPONSORED BY TRANSNET

	HEAPHY ROOM 1	HEAPHY ROOM 2	HEAPHY ROOM 3	BROOKLYN 1 & 2 (UPSTAIRS)
	DEMAND RESPONSE	FUTURE GRID	INNOVATIVE TECHNOLOGY	CARBON ZERO/FUTURE GRID
4pm	WEL Network's DSO Journey DSO Strategy and Roadmap Lingsong Zheng, WEL Networks	The Prudent Network Owner/Operator Richard Gibbons, Gibbons Consulting	Decentralized Photovoltaic-Battery based Mini-grid for Tanzania's Rural Areas Hashim Khamis, Victoria University of Wellington	Platform for querying Electricity Distribution Network Models and associated Technical Data Sameer Phadnis, Unison Networks Ltd
4.30pm	Smart Meter Data Analytics Rajiv Pratap, WEL Networks DER Integration and Value Stack Matthew Whitmore, WEL Networks LV Management & DERMS pilot Gary Carleton, WEL Networks	The early collaborative and proactive behaviour required to enable utility-scale distributed generation connections to the distribution network. Georgin Raju, Powerco Ltd, Kieran Kennedy, Mitton Electronet	Disruptive Technology Glenn Sullivan, Fonterra	Data-driven, metaheuristic-based off-grid microgrid capacity planning optimisation and scenario analysis: Insights from a case study of Aotea-Great Barrier Island Prof. Alan Brent, Victoria University of Wellington
5pm		Future Proofing the New Zealand Grid Through Sustainable Innovations Georgina Price, BECA (APEX 2021 Winning Presentation)	Powerco's Whangamata Battery Energy Storage System – Functional Use Cases, System Performance & Operational Experience Gabriel Lim & Vijay Hirani, Powerco	Opportunities for New Technologies to Release LV Capacity David Mills, EA Technology

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

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WEDNESDAY, 21 SEPT 2022				
	HEAPHY ROOM 1	HEAPHY ROOM 2	HEAPHY ROOM 3	BROOKLYN 1 & 2 (UPSTAIRS)
	CARBON ZERO	FUTURE GRID	SAFETY	INNOVATIVE TECHNOLOGY
8.30AM	Hydrogen Economy trends and gaps in New Zealand context Dr. Kosala Gunawardane, AUT	Reducing barriers to public EV charger installation by improving the utilization and monitoring of distribution transformers Daniel Martin, ETEL Transformers	Integrating management systems to help power the future Dr. Christopher Peace, Victoria University of Wellington	High Voltage Reverse Synchronization, how we limit customer outages using our mobile generator fleet Peter Allen, Orion NZ
9.00am	Emissions Accounting for Rooftop PV Sharee McNabb, EPECentre, University of Canterbury	Automation in Demand Flexibility Technology – How do we meet the changing electricity mindset? Emily Adams, Meridian Energy	A pragmatic approach to electrical safety Patrick Coombe, Mitton Electronet	Management of Auto Reclosers for Fire Mitigation Brett McClelland & Rolf Holmsen, Orion NZ
9.30am	Lite Weight solar enabling distributed industrial PV at scale Andrew Renton, Transpower	Re-imagining Our Network Automation Chris Knight, Counties Energy	Earthing with an Abundance of Caution – How Conservative is too Conservative? Philip Boys, Mitton Electronet	Early Fault Detection prevents powerline faults and fires Kristian Vukadin, IND Technology (EESA Winning Paper)
10.00am	Investigation of the aggregated EMI generation in the LVDC Microgrids due to multiple DC-DC Converters Angaline Krishna, Kiwirail Engineering	Smart Local Energy Systems – A UK Feasibility Case Study David Mills, EA Technology	A Comparison of Safety in Design Practices in Transmission Lines Design for Utilities in Australia and New Zealand Tim Klingenberg, AECOM	Low Voltage Transformer Monitoring Trial: A Two Vendor Approach Johnathon Green, Horizon Networks
10:30am	MORNING TEA IN TRADE EXHIBITION			
	HEAPHY ROOMS 1 TO 3			
10.50am	Simon Currie, Co-Founder & CPO, Energy Estate			
11.20am	Peter Nunns, Director of Economics, New Zealand Infrastructure Commission Te Waihanga			
11.50pm	Peter Brown, Managing Director, Power System Consulting - Gauntlets, Infinity and the Energy Transition			
12.20pm	EEA Awards Ceremony			
12.40pm	LUNCH IN TRADE EXHIBITION - SPONSORED BY TRANSNET			
	HEAPHY ROOM 1	HEAPHY ROOM 2	HEAPHY ROOM 3	BROOKLYN 1 & 2 (UPSTAIRS)
	CARBON ZERO	PANEL SESSION	DEMAND RESPONSE	CARBON ZERO
2.10pm	From Inception to Concept in 24 Hours – A New Paradigm for Greenfield Substation Design Brad Henderson, Mitton Electronet	'Delivering engineering capability for decarbonisation' Panel Chair: Michael Whaley, Powerco	Control or co-ordinate DER? IEC 62746 (openADR) and IEEE2030.5 Terry Paddy, Cortexo	Harmonic Compliance for New Generation – Why Open Stakeholder Engagement Leads to Better Outcomes Rob Orange, Tesla Consultants
2.40pm	Modular substations – a mechanism for future Grid connections Andrew Baird, AECOM	Panelists: Mike Grumball, Waihanga Ara Rau Rob McCrone, EEA Advisor Andrew Renton, Transpower	The path toward DSO'S and FT'S - and a whole lot of other TLAS! Rodger Griffiths, Electronet Services	Static Frequency Converters – The Quest to Find a Third Traction Power Supply for Auckland Terrance Ibasco, Edison Consulting Ltd
3.10pm	Automating Transmission Line Upgrades with a Focus on Sustainability Katie Benner & Trent Kleinsman, Beca		The now and the future of New Zealand Automatic Under Frequency Load Shedding system Alexey Kabalinskiy & Leonie Bule, Transpower	Demystifying the New Zealand Connection Study Process Karl Schicker & Alexander Apukov, Mitton Electronet
3:40pm	CLOSE OF CONFERENCE IN HEAPHY ROOM 2			