

EMCONZ 2022

15 SEPTEMBER
AUCKLAND



**ELECTRICAL
ENGINEERING
GROUP**



Time	Activity		
8:00 – 8:30	Registration & Coffee		
8:30 – 8:50 WG308	General Introduction Greg Ward (MC) Chair's Opening Address Rishen Maharaj and Simon Hall		
8:50 – 9:07 WG308	Keynote Speech David Seymour Leader of the Act Party and an Electrical Engineer.		
9:07 – 9:10	Speaker Introduction and move		
	WG126	WG308	WG404
9:10 – 9:32	How refrigerant choices impact our environment and the heat pump systems we design Bernhard Schmiedeke	Nuclear Nirvana - The Gas Turbine Nuclear Powerplant Gerhard Benade	The Multidisciplinary Challenges Associated with the Decarbonisation of Energy Systems Jason Bretherton
9:32 – 9:37	Questions		
9:37 – 9:40	Move		
9:40 – 10:02	Energy Storage: The elephant in the room Bryan Leyland	Decarbonisation Roadmap for Small and Medium Enterprises (SMEs) Haris Murtaza	Ventilation principles and strategies to reduce the spread of airborne contaminants in the workplace Hugh Evans
10:02 – 10:07	Questions		
10:07 – 10:10	Move		
Morning Break (20 minutes)			
10:28 – 10:30	Introduction and move		
	WG126	WG308	
10:30 – 11:02	Decarbonisation of Transport – The Real Costs and Implications Kristian Jensen	Vocational Engineering Education and Degree Apprenticeships Update Adrian Ferguson	
11:02 – 11:07	Questions		
11:07 – 11:10	Move		
11:10 – 11:42	Generator Fuel Storage for Critical Infrastructure in NZ Hamish McLean	The role of Building Services Engineers in designing seismically resilient building systems Sara Hinz	

	WG126	WG308	
11:42 – 11:47	Questions		
11:47 – 11:50	Move		
11:50 – 12:12	Using Cameras as the Eye in IoT Jan le Roux	Occupational Regulation for Mechanical & Electrical Engineers Richard Templer	
12:12 – 12:17	Questions		
12:17 – 12:20	Move		
12:20 – 12:32	Gas is Changing – Biogas in the Firstgas Transmission Network Tim Lepper	Best Foot Forward - An Engineer's Perspective on How to Develop Successful Products Greg Storey	
12:32 – 12:37	Questions		
12:37 – 12:40	Move		
Lunch (45 minutes)			
13:23 – 13:25	Introductions and move		
Quickfire presentations			
	Session 1: WG126	Session 2: WG308	
13:25 – 13:40	Richie Rail Illuminated Handrails from Offspring Profiles Robin Campbell	Modular Wiring system based on different sector applications, such as Commercial, Healthcare/Hospital and Education Simon Waldren	
13:45 – 14:00	New Generation Motors with Digital Motor Integration (DDI) Neil Smit	Engineering tangata Tiriti Daniel Jardine	
14:05 – 14:20	Containerised Switch Rooms – A Valid Solution with Considered Design Wernher Roding	Leaning on Strengths and Partnering for Success Matt Bradley	
14:20 – 14:25	Move to WG308		
14:25 – 15:10 WG308	Panel: Future Renewable Technologies in New Zealand: Direction and Focus Facilitated by Professor Tek Tjing Lie		
	Professor Aman Oo (Head of School of Engineering, Computer and Mathematical Sciences) Professor Masud Khan (Head of Mechanical Engineering Department) Dr Craig Baguley Dr Kosala Gunawardane		
Afternoon Break (20 minutes)			
15:28 – 15:30	Introduction and move		
	WG126	WG308	WG404
15:30 – 16:02	Planning for Mass EV Charging Systems Jonny Parker	Investigating the Carbon Emissions of Conventional & Semi Hybrid Insulation in Power Transformers Under New Zealand Energy Mix Bhaba Das	Smart Distribution George Janiszewski
16:02 – 16:07	Questions		
16:07 – 16:10	Move		

	WG126	WG308
16.10 – 16:42	A New Lens on Vision-Based Analysis Mervin De Lancea	Increasing Revenue and Reducing Costs Through the Smart Thermal Management of Transformers Dan Martin & Craig Baguley
16:42 – 16:47	Questions	
16:47 – 16:50	Move	
16:50 – 17:07	Optimised condition-based lubrication of rotating equipment using IOT linked structure borne ultrasound and automated remote lubricators James Neale	Issues on the Present Emergency Lighting System George Wang
17:07 – 17:12	Questions	
17:12 – 17:15	Move to main WG308	
17:15 WG308	Closing Address	
18:30	Conference Dinner Royal New Zealand Yacht Squadron	

Please note the programme is subject to change