

# New Zealand Geothermal Workshop 2021 (postponed) Programme Draft

## Monday 31 January

15:00	Registration Open
15:00 - 17:00	<b>NZGA AGM</b>
17:30	Welcome Reception   Te Papa
19:00	

## Tuesday 1 February

8:00	Registration Open
8:30	Welcome and Opening
8:45	<b>GLOBAL GEOTHERMAL and NZ: Keynote Speaker   Minister of Energy Megan Woods</b>
9:15	<b>THE CLIMATE CHANGE IMPERATIVE</b> Jo Hendy - CE, Climate Change Commission
9:45	House keeping
10:00	<b>Morning Tea</b>
10:30	<b>MOVING TOWARDS A SUSTAINABLE ENERGY SYSTEM</b> Andrew Caseley - CE, Energy Efficiency and Conservation Authority (ECCA)
11:15	<b>THE FUTURE OF THE NZ ELECTRICITY SECTOR</b> Chair: Rosalind Archer Panelists: Tina Schirr - Executive Director, Business Energy Council John Hancock - Consultant, Electricity Authority Alison Andrew - GM Strategy and Customer, Transpower Marcos Pelenur - Group Manager - Strategy, Insights & Regulations, ECCA
12:00	<b>Lunch</b>
13:00	<b>CENTRAL GOVERNMENT INVESTMENT TOWARDS DECARBONISATION</b> Suzannah Toulmin - Team Leader, Energy Transition, MBIE
13:30	<b>CENTRAL GOVERNMENT INVESTMENT TOWARDS DECARBONISATION</b> Phil Anderson - Lead - CleanTech, Callaghan Innovation
14:00	Case study
14:30	<b>Afternoon tea</b>
15:00	<b>MĀORI INVESTMENT TOWARDS DECARBONISATION</b> Chair: Kererua Savage (TBC) Aroha Campbell - Tauhara Moana Trust, Taupo Hillemare Schulze - Chief Economist at BERL Spence McClintock - Group CEO, Ngati Tuwharetoa Geothermal Assets Ltd, Kawerau, Ngati Tuwharetoa (BOP) Settlement Trust, Ngati Tuwharetoa Holdings Limited, Ngati Tuwharetoa Electricity Limited Northland - Ngāwhā geothermal field. NgāwhāMARA/ Ngāti Rangi and Top Energy Jamie Tuuta - Chair of Taranaki Mouna, Jamie is also the chair of Tourism New Zealand, the Māori Television Service, Venture Taranaki, Te Rūnanga o Ngāti Mutunga, Ka Uruora and Te Kahui Maru GP. He is also a director of Moana Ltd and Taranaki Whanui Ltd. Hon. Willie Jackson - Minister of Maori Development, head of Te Puni Kōkiri (Ministry of Māori Development) Traci Houpapapa - Chair FOMA
16:30	Kennie CO2 industry progress (TBC)
18:30-24:00	<b>WING and NZGA: Networking Event – Drinks sponsored by Western Energy - St. John's Bar &amp; Eatery</b>

## Wednesday 2 February

7:30	<b>GNS Breakfast</b>			
8:45	Housekeeping			
9:00	<b>Keynote Speaker   Gioia Falcone, Rankine Chair, Professor of Energy Engineering, University of Glasgow, Scotland</b>			
9:45	<b>MB CENTURY   INDUSTRY UPDATE</b>			
10:00	<b>Morning Tea</b>			
	Session 1.1	Session 1.2 - Social & Community	Session 1.3 - Reservoir Modelling 1	Session 1.4 - Geochemistry, & direct use
	Sounding Theatre	Icon Room	Rangimare 1	Rangimare 2
	Treaty Room 1	Treaty Room 2	Rangitira Room	
10:30	<b>SCHLUMBERGER   INDUSTRY UPDATE</b>	36   REGIONAL GOVERNMENT STRATEGY FOR THE SUSTAINABLE USE AND DEVELOPMENT OF THE KAWERAU GEOTHERMAL FIELD BY MULTI-TAPPERS IN NEW ZEALAND - Jason Laurent	69   COMPARISONS OF AUTOUGH2 AND WAIWERA ON REAL GEOTHERMAL FIELDS - John O'Sullivan	17   GEOTHERMAL PROSPECTIVITY OF THE TARANAKI SEDIMENTARY BASIN - Agnes Reyes
10:45	<b>SUEZ   INDUSTRY UPDATE</b>	45   RESIDENTIAL HEATING FROM LOW GEOTHERMAL TEMPERATURES - Celia Wells	113   PRACTICAL WORKFLOW FOR TRAINING IN GEOTHERMAL RESERVOIR MODELLING - Théo Renaud	5   EXPERIMENTAL STUDY ON RARE EARTH ELEMENT MOBILITY DURING GREYWACKE - WATER INTERACTIONS - Lucjan Sajkowski
11:00	<b>NALCO   INDUSTRY UPDATE</b>	9   PRODUCTIVE AND ALLOCATIVE EFFICIENCY - ROTORUA GEOTHERMAL FIELD - Mariana Zuquim	82   MODELLING TRACER BREAKDOWN UNDER GEOTHERMAL CONDITIONS - John Burnell	57   THE POTENTIAL FOR GEOTHERMAL EMISSIONS STORAGE IN THE TAUPŌ VOLCANIC ZONE, NEW ZEALAND - Iwona Galeczka
11:15	<b>SOLENIS   INDUSTRY UPDATE</b>	73   NEW ZEALAND'S ROLE IN GEOTHERMAL DEVELOPMENT IN EAST AFRICA - Jane Brotheridge	80   THE RESERVOIR EFFECTS OF PASSIVE NCG REINJECTION AT TE HUKA GEOTHERMAL BINARY POWER PLANT - Nataly Castillo Ruiz	51   COFFEE DRYING SYSTEM DESIGN FOR GEOTHERMAL DIRECT USE APPLICATION IN FLORES ISLAND - Pradana Vian Prasetyo
11:30	<b>WORLEY   INDUSTRY UPDATE (TBC)</b>	70   CHALLENGES OF GEOTHERMAL DEVELOPMENT IN SMALL ISLAND DEVELOPING STATES - Alastair Brookes	63   MODELLING TRACERS USING THE WAIWERA GEOTHERMAL FLOW SIMULATOR - Adrian Croucher	
11:45	<b>GOETHERMAL NEW ZEALAND   INDUSTRY UPDATE</b>	93   THE POTENTIAL AND SOCIOECONOMICS IMPACTS OF GEOTHERMAL DIRECT-USE ON IMATALOKO, FLORES ISLAND, NUSA TENGGARA TIMUR, INDONESIA - Fikha Fininda	12   PERFORMANCE OF A GEOTHERMAL SYSTEM IN PETROLEUM FIELDS OF THE TARANAKI REGION, NEW ZEALAND - Rohit Duggal	
12:00	<b>Lunch and Posters Session</b>			
	Session 2.2	Session 2.2 - Drilling & Well Testing 1	Session 2.3 - Production & Management 1	Session 2.4
	Sounding Theatre	Icon Room	Rangimare 1	Rangimare 2
13:00	<b>Keynote Speaker: Jacqui Nelson - Chief Generation Officer, Contact Energy Ltd, New Zealand</b>			
14:00	<b>GNS   INDUSTRY UPDATE</b>			
14:15	<b>NGATI TUWHARETOA GEOTHERMAL ASSETS   INDUSTRY UPDATE</b>	98   DE-RISKING GEOTHERMAL PROJECTS BY RE-THINKING WELL DESIGN AND CONSTRUCTION MINDSET - Søren Hallundbæk	91   ASSESSING THE VIABILITY OF GEOTHERMAL PROJECTS USING PUMPED WELLS - Greg Ussher	
14:30	<b>WESTERN ENERGY   INDUSTRY UPDATE</b>	53   LESSONS LEARNT IN THE USAGE OF PRESSURE WHILE DRILLING (PWD) TO JUSTIFY DRILLING DECISIONS - Olivia Go	35   CASE STUDY OF MASS FLOW DECLINE IN PRODUCTION WELL NM11 - Jamie Potter	

14:45	MERCURY ENERGY   INDUSTRY UPDATE	81   THE USE OF HIGH RESOLUTION ULTRASONIC WELL LOGGING TOOLS TO ENHANCE WELL INTEGRITY MANAGEMENT - Laurie Todd	107   THE USE OF VENTURI DURING BINARY PLANT PENTANE EVACUATION - Fabian Hanik	
15:00	EASTLAND GENERATION   INDUSTRY UPDATE	14   LESSONS LEARNED AND PERFORMANCE IMPROVEMENT: DRILLING CASE STUDY FROM SARULLA GEOTHERMAL OPERATION, NORTH SUMATRA - Hadi Permana	46   NGAWHA OEC4 GEOTHERMAL FLUID SEPARATION – HORIZONTAL SEPARATOR SELECTION AND PERFORMANCE - Michael Rock	
15:15	Afternoon tea			
	Session 3.2	Session 3.2 - Geothermal Geology	Session 3.3 - Reservoir Modelling 2	Session 3.4 - Mātauranga Māori, & Environmental
	Sounding Theatre	Icon Room	Rangimare 1	Rangimare 2
15:45	SEEQUENT   INDUSTRY UPDATE	38   INVESTIGATING CONTROLS ON GEOTHERMAL UPFLOW BENEATH THE ROTORUA LAKES - Sophie Pearson-Grant	55   NUMERICAL MODELLING OF FLUID FLOW AND HEAT TRANSFER IN A DUAL-POROSITY DOMAIN IN THE SHALLOW ZONE AT NESJAVELLIR GEOTHERMAL SYSTEM - Esteban Gomez-Diaz	15:45-16:05: 118   A SUPERCRITICAL JOURNEY INTO TE AO MĀORI - Melissa Climo
16:00	JACOBS   INDUSTRY UPDATE	116   WHANGAIROROHEA GEOTHERMAL AREA AND THE DEMISE OF A HIGH TEMPERATURE TVZ GEOTHERMAL SYSTEM - Andrew Rae	6   VOLSUNG: INVERSE MODELLING AND UNCERTAINTY ANALYSIS USING PEST - Peter Franz	16:05-16:25: 119   NGĀ WAI ARIKI O ROTORUA:HE KOHIKOHINGA (A HAU KAINGA PERSPECTIVE ON ROTORUA GEOTHERMAL) - Lani Kereopa
16:15	TN2T   INDUSTRY UPDATE	86   HYDROTHERMAL ALTERATION AND EVOLUTION OF THE ROTOKAWA GEOTHERMAL SYSTEM - Mark Simpson	43   A NEW NUMERICAL MODEL OF THE OHAAKI GEOTHERMAL FIELD - Michael O'Sullivan	
16:30	DOBBIE   INDUSTRY UPDATE	4   SINTER MORPHOLOGY AND THERMAL INFRARED IMAGERY: A DUAL APPROACH TO TRACKING HYDROTHERMAL CHANGES AROUND OLD FAITHFUL GEYSER, YELLOWSTONE, USA - Bridget Lynne	90   TESTING SPATIALLY FLEXIBLE BOTTOM BOUNDARY PARAMETER SCHEMES AND PRIORS FOR GEOTHERMAL RESERVOIR MODELS - Elvar Bjarkason	16:25-16:45: 122   EMPOWERING INDIGENOUS EPISTEMOLOGIES IN GEOTHERMAL DEVELOPMENT - Te Kīpe Kēpa Morgan
16:45	THORNDON COOK   INDUSTRY UPDATE	11   TECTONIC OF MINAHASA DISTRICT: AN UPDATE FROM LOCAL TOMPASO GEOTHERMAL FIELD DATA - Muhammad Ikhwan	78   DATA-SPACE INVERSION FOR EFFICIENT GEOTHERMAL RESERVOIR MODEL PREDICTIONS AND UNCERTAINTY QUANTIFICATION - Andrew Power, Daniel Wong	42   A REVIEW OF GEOTHERMAL RESOURCE MANAGEMENT UNDER THE RMA 1991 WITH A VIEW TO THE FUTURE - Katherine Luketina
17:00	MTL   INDUSTRY UPDATE	83   AN INSIGHT OF THE SUBSURFACE THROUGH BOREHOLE IMAGES CASE STUDY OF MW-34 MENENGAI GEOTHERMAL FIELD, KENYA - Marietta Mutonga	26   MODELLING DISCHARGE STIMULATION USING A TRANSIENT WELLBORE SIMULATOR WITH AN AIR-WATER EQUATION OF STATE - Ryan Tonkin	111   GEOTHERMAL GREENHOUSE GAS EMISSIONS IN NEW ZEALAND IN 2020: LIFECYCLE AND OPERATIONAL EMISSIONS - Katie Mclean
17:15	NZGA   INDUSTRY UPDATE	67   LINEAMENT EXTRACTION AND ANALYSIS USING REMOTE SENSING IN NORD-GHOUBBET GEOTHERMAL FIELD, DJIBOUTI - Samod Youssouf Hassan	59   DATA-WORTH ANALYSIS: DESIGNING A MONITORING PLAN FOR ROTORUA THAT REDUCES UNCERTAINTY - Ken Dekkers	39   NUMERICAL MODELLING FOR CARBON ACCOUNTING FROM GEOTHERMAL POWER - Michael Gravatt
17:30	Manfred Hochstein career review - Barbara Hochstein (TBC)			
19:00	NZGW Conference Dinner - Wellington Museum			
10:30				

## Thursday 3 February

8:45	Housekeeping			
9:00	Keynote Speaker   (INTERNATIONAL PRESENTATION) Jaime Beard - Executive Director Geothermal Entrepreneurship Organization (GEO), University of Texas, USA			
9:45	Morning Tea			
	Session 4.1	Session 4.2 - Production and Management 2	Session 4.3 - Geophysics	Session 4.4: Drilling & Well Testing 2
	Sounding Theatre	Icon Room	Rangimare 1	Rangimare 2
10:15	WAIKATO REGIONAL COUNCIL   INDUSTRY UPDATE	65   ANALYSIS OF THE IMPACT OF THE REINJECTION OF GASES ON THE MASS FLOW RATE FROM PRODUCTION WELLS IN GEOTHERMAL SYSTEMS - Anu Choudhary	75   DISTRIBUTED TEMPERATURE SENSING IN FRACTURED LOW ENTHALPY RESERVOIRS – LESSONS LEARNED IN NEW ZEALAND AND CENTRAL EUROPE - Lucie Janku-Capova	20   THEORETICAL MODELS OF MAGMA ASCENT IN A GEOTHERMAL BOREHOLE - David Dempsey
10:30	BAY OF PLENTY REGIONAL COUNCIL   INDUSTRY UPDATE	23   ACCURACY AND RELIABILITY ANALYSIS OF TRACER FLOW TESTING IN GEOTHERMAL SYSTEMS - Zhilin James Dong	97   ANISOTROPIC GEOTHERMAL HOST ROCK? CASE STUDY OF NEVADO DEL RUIZ, COLOMBIA - Pablo Aguilera Bustos	44   USING ELECTROMAGNETIC TELEMETRY FOR ABANDONMENT CEMENT SLURRY DESIGN ON COILED TUBING - Josh Anderson
10:45	WHAKAREWAREWA   INDUSTRY UPDATE	61   MODELLING AND OPTIMIZATION OF A BINARY POWER PLANT UTILISING A LOW TO MEDIUM TEMPERATURE GEOTHERMAL RESOURCE - Brent Young	10   HEAT FLUX DYNAMICS THROUGH THE CLAY CAP IN THE WAIRAKEI-TAUHARA GEOTHERMAL FIELD QUANTIFY BY MAGNETOTELLURIC, METHYLENE BLUE, AND TEMPERATURE DATA - Alberto Ardid	108   COILED TUBING LIVE WELL CLEANOUTS - Daniel Wilson
11:00	UPFLOW   INDUSTRY UPDATE	3   INVESTIGATION OF COOLING WATER CHEMICAL DOSING: THE OHAAKI GEOTHERMAL POWER STATION COOLING TOWER - Morris Young	58   MACHINE LEARNING INVESTIGATION OF INJECTION-SEISMICITY IN ROTOKAWA GEOTHERMAL FIELD - Pengliang Yu	99   COMPARISON OF GEOTHERMAL WELL COST FOR SLIMHOLE EXPLORATION VERSUS BIGHOLE EXPLORATION - Vicki Agustino
11:15	HALLIBURTON   INDUSTRY UPDATE	56   TECHNO-ECONOMIC ESTIMATION OF THE GEOTHERMAL POTENTIAL OF EXISTING COLUMBIAN OILFIELD PRODUCTION WELLS - Brent Young	2   NEAR-SURFACE GEOTHERMAL MAPPING – TESTING THE tTEM GEOPHYSICAL TECHNIQUE IN THE ROTORUA GEOTHERMAL FIELD - Rob Reeves	16   LOW-TEMPERATURE THIXOTROPIC CEMENT DESIGN OVERCOMES SURFACE SECTION DRILLING CHALLENGES – GEOTHERMAL EXPLORATION PROJECT, CENTRAL JAVA - Hadi Permana
11:30	GEOTHERMAL INSTITUTE   INDUSTRY UPDATE	33   STEAM PURTITY TROUBLESHOOTING: THE BERALIN STREAM FIELD, EL SALVADOR - Cristo Umanzor	29   PHYSICAL, GEOCHEMICAL AND MINERALOGICAL CHARACTERISTICS OF THE ALTERATION AND DEFORMATION HALO ABOVE THE DIORITE-TONALITE INTRUSIVE AT NGATAMARIKI - Steven Sewell	94   HYDRAULIC RIG AND ITS CHALLENGE TO CONDUCT SLIMHOLE GEOTHERMAL EXPLORATION DRILLING - Hafni Wiharlan
11:45	WING   INDUSTRY UPDATE		30   IMAGING THE ALTERATION AND DEFORMATION HALO ABOVE THE DIORITE-TONALITE INTRUSIVE AT THE NGATAMARIKI GEOTHERMAL FIELD - Steven Sewell	62   EVOLUTION OF GEOTHERMAL DIRECTIONAL DRILLING IN INDONESIA THROUGH FIT-FOR-PURPOSE ENGINEERING WORKFLOWS AND TECHNOLOGY MAPPING - Agus Ziyad Kurnia, Michael Ari Dhanto
12:00	Lunch			
13:00	Keynote Speaker   (INTERNATIONAL PRESENTATION) Ahmad Yuniarto - President Director, Pertamina Geothermal Energy (PGE), Indonesia			
	Session 5.1	Session 5.2 - Reservoir Modelling 3 & Future	Session 5.3 - Scaling and Corrosion	Session 5.4 - Production and Management 3
	Sounding Theatre	Icon Room	Rangimare 1	Rangimare 2

13:45	<b>DEMETER   INDUSTRY UPDATE</b>	25   NUMERICAL INVESTIGATION OF COUNTER-FLOW PROCESSES IN GEOTHERMAL WELLS - Ryan Tonkin	109   ONLINE RECOVERY OF GEOTHERMAL REINJECTION WELLS: REMOVAL OF SILICA-BASED FORMATION SCALE AND STIMULATION - Dan Wilson	120   STEAM SEPARATOR SELECTION FOR A GEOTHERMAL POWER STATION - Leigh Mclellan, Kevin Koorey
14:00	<b>NZTE   INDUSTRY UPDATE - Indonesia</b>	18   CARBON NEGATIVE GEOTHERMAL: THEORETICAL COMBINED GEOTHERMAL-BIOMASS CO2 INJECTION CYCLE - Karan Titus	110   CHEMICAL REMOVAL OF FORMATION SCALE IN GEOTHERMAL PRODUCTION WELLS - Katie Mclean	121   LOST IN THE JUNGLE - A REVIEW OF THE STILL-RADICAL GEOTHERMAL DEVELOPMENT AT KIABUKWA, DR CONGO - Brian White
14:15	<b>NZTE   INDUSTRY UPDATE - Philippines</b>	64   NEW ZEALAND'S PATHWAY TO SUPERCRITICAL GEOTHERMAL ENERGY USE: MOVING FORWARD TO EXPLORATION DRILLING - Brian Carey	28   TURNING THE PRESSURE ON FOR THE NANO-STRUCTURED CALCIUM SILICATE HYDRATE (CASIL) SOLUTION TO SILICA SCALING - Thomas Borrmann	92   GENERATOR, TURBINE AND THERMAL EFFICIENCY OF LUMUT BALAI GEOTHERMAL POWER PLANT - Erwandi Yanto
14:30	<b>NZTE   INDUSTRY UPDATE - Taiwan</b>	54   SYNERGIES BETWEEN GEOTHERMAL AND SOLAR PV GENERATION: AN EXAMPLE BUSINESS CASE - Alex Batten	13   RECOVERY OF REINJECTION WELL CAPACITY USING ONLINE SCALE DISSOLUTION - Fritz Earwin Monterozo	32   DEI, DOUBLE ENERGY INPUT. UNDERGROUND MODEL - Daniel Ramirez
14:45	<b>NZTE   INDUSTRY UPDATE - Japan</b>	84   GEOTHERMAL AND HYDROGEN: COULD HYDROGEN MAKE SOME GEOTHERMAL PROJECTS VIABLE? - Abbie Dean	47   CORROSION RATE ESTIMATION OF CR CASING STEELS AT HIGH TEMPERATURE ACID CONDITIONS - Norio Yanagisawa	
15:00	<b>Workshop awards and close</b>			
15:30	<b>Afternoon tea</b>			