

PRELIMINARY PROGRAMME As at 24 May 2024

DAY 1: TUESDAY 28 MAY 2024

Christchurch Town Hall, Christchurch

TE RADAR | CONFERENCE MC Te Radar appears by arrangement with Johnson & Laird Management

	Ground Floor Foyer		
11.10am	Networking Break in the Industry Exhibition		
10.50am	MEET THE EXHIBITORS		
	these uses evolve over time? What are the main policy and commercial barriers	to growing the industry to help achieve our net zero 2050 target?	
	opportunities. What feedstocks are available to supply production facilities? What are the main use cases for renewable gas in New Zealand and how might		
	The presentation will outline a vision of how biomethane and hydrogen could meet domestic demand for gas by 2050, focusing on near to medium term scale-up		
10.20011	BEN GERRITSEN GENERAL MANAGER CUSTOMER AND REGULATORY, CLARUS		
10.25am	Scaling-Up Renewable Gas Production and Use in Aotearoa	חוסגר דבובות אסווגי מביבוטאווובותג מווע ובאגטווא ובמדובע.	
	policy implementation, deployment, and a step up in efficiency investment work efficiency and set out the opportunities for faster action, looking at some of the		
	IEA's analysis showing that, for the pathway to a net zero energy system, such ar		
	COP28 saw a historic agreement at COP28 to set a global collective ambition to c		
	BRIAN MOTHERWAY HEAD OF THE OFFICE OF ENERGY EFFICIENCY AND INCLU		
9.25am	Energy Efficiency – An Action Agenda		
	MAYOR PHILIP MAUGER MAYOR OF CHRISTCHURCH		
9.20am	Welcome to Christchurch		
5.150111	CEP BOARD MEMBER / MIKE HOPKINS		
9.15am	Welcome from CEP		
9.10am	Welcome and Housekeeping TE RADAR MC		
0.100m	DAVE BRENNAN Welsome and Ususekeening		
9.00am	Mihi Whakatau		
	Limes Room, Level 1		
	Session 1 Conference Opening and Welcome		
	Ground Floor Foyer		
8.00am	Registration and Coffee		

	Limes Room, Level 1		Victoria Room, Level 1	
11.40am	A Net-Zero Carbon Concrete Industry: A Sustainable Most Widely Used Construction Material RALF KESSEL HEAD OF ARCHITECTURE, CONCRETE N The New Zealand concrete industry has unveiled its tr roadmap, outlining a plan to achieve net-zero carbon sustainability. This paper offers valuable insights for ca professionals on the ambitious but achievable decarbo face of the pressing climate crisis, the concrete indust mitigation and adaptation efforts. The roadmap emph all construction stakeholders, carbon and energy profe translate vision into reality. Together, we can work too future, where concrete help to reduce carbon emissio	IZ ansformative 2050 emissions and drive arbon and energy onisation pathway. In the ry recognizes its role in asizes collaboration with essionals included, to wards a sustainable	JONATHAN POOCH MAR MATT MARSHALL CHEM JACK YOUNG ENGINEER JACK TIMINGS INDUSTR ADRIAN DICKISON TECH This panel builds upon the opportunities), as a session heat pump projects. This is the following: • Preliminary and co • Equipment specifi	e workshop from CEP23 (Identifying heat pump on on lessons learned and reflections from real-work interactive panel, discussion and workshop will cover detailed design.
12.10pm	world. Finding A Way to Decarbonisation – Eradicating Fossi Heat ROSS GODKIN NATIONAL MANUFACTURING MANA Showcasing the real-world application of overcoming to in moving away from fossil fuel derived Process Heat to involves our journey of investigating like-for-like replace of process heat peak demand, by thinking differently. how we mode the operation which reduced peak enerror MW to 200KW to work within our existing supply capa	GER, ROAD SCIENCE he challenges involved o renewable energy. It cement, then downsizing This resulted in changing gy demand from 1.3		
12.40pm	STUDENT PAPERS Intelligent Knowledge-Based Decision Support System for Assessing the Data Quality Assurance of Environmental Product Declaration Cycle Assessment OLUDOLAPO OLANREWAJU Investigating Slow Ground Source Heat Pump Uptake in Aotearoa New Zealand: An Energy Cultures Framework Analysis ANI BARR Physically-Motivated Approach to Incorporating Solar Gain Into A Data-Driven Model of Building Energy Consumption, With Pay-For-Po Applications ANTHONY MIRFIN Optimisation of Renewable Energy Resources in New Zealand: A P-Graph Approach JACK O'LEARY Carbon and Energy Footprints of Renewable Electricity in Aotearoa New Zealand: Life Cycle Analyses of Solar and Wind Generation IS		nmental Product Declaration for Whole Building Li	
	Investigating Slow Ground Source Heat Pump Uptake Physically-Motivated Approach to Incorporating Solar Applications ANTHONY MIRFIN Optimisation of Renewable Energy Resources in New Carbon and Energy Footprints of Renewable Electricit	r Gain Into A Data-Driven I Zealand: A P-Graph Appro	Model of Building Energy C bach JACK O'LEARY	onsumption, With Pay-For-Performance
1.05pm	Investigating Slow Ground Source Heat Pump Uptake Physically-Motivated Approach to Incorporating Solar Applications ANTHONY MIRFIN Optimisation of Renewable Energy Resources in New	r Gain Into A Data-Driven I Zealand: A P-Graph Appro	Model of Building Energy C Dach JACK O'LEARY d: Life Cycle Analyses of So	onsumption, With Pay-For-Performance

2.00pm	How to Build on the Step Change of 2023	Unlock the Potential of Green Information	Laying Foundations to Realise Sustainable Asset
	RICHARD BRIGGS GROUP MANAGER - DELIVERY	Technology in New Zealand: A Journey Towards	Management and Carbon Accounting Practices in
	AND PARTNERSHIPS, EECA	Sustainable Computing	NZ
	KANCHANA MARASINGHE MANAGER -	JEAN-PHILIPPE EHRET GREENIT EXPERT AND	PRIYANI DE SILVA-CURRIE TECHNICAL FELLOW
	INNOVATION PORTFOLIO, EECA	FOUNDER, BETTERBYTES	STRATEGIC ASSET MANAGEMENT, BECA
	Carrying out decarbonisation projects is not	Unveil the potential of Green IT with Jean-Philippe	HELEN HOLYOAK CONSULTANT / MSP STUDENT,
	easy. Over the past two years we have seen NZ	Ehret from BetterBytes, championing sustainable IT	САКЕ
	firsts and world firsts, with tireless project teams	practices in New Zealand. Jean-Philippe provides an	Evolving societal, economic, environmental and
	who need to be celebrated. This year, EECA has	overview of Green IT's challenges and	regulatory expectations in NZ will see asset
	been gathering data and insights across completed	opportunities, emphasizing its pivotal role in	managers and infrastructure professionals
	decarbonisation projects so we can share patterns	conserving resources and curbing GHG emissions,	becoming connectors and operational
	and lessons with the industry. This presentation	projected to surpass car emissions by 2025. Delve	implementers of sustainable strategies as carbon &
	will cover some of those insights. It will also share	into real-world successes like the Hawke's Bay	asset management are woven together. This
	RETA data, modelling and information that has	Regional Council pilot, showcasing tangible	workshop invites you to explore the introduction of
	become evident with reports complete across all	outcomes in addressing environmental challenges	indigenous approaches alongside traditional
	South Island regions. This includes changing fuel	while reducing operational costs. Explore disruptive	methodologies to support sustainable
	and abatement profiles, improving project	technology, energy-efficient computing, eco-design,	infrastructure decision making and lifecycle
	economics, and better information about future	and sustainable procurement practices. Discover	investment. We hope you will share knowledge and
	energy needs and locations. Lastly, we will share	how to leverage unparalleled data store to drive	challenges on your own journey and we aim to
	work EECA has been doing to refresh its strategy,	sustainability in IT operations. Gain valuable insights	leave you feeling enlightened about how to place
	including electrifying New Zealand and empowering	into regulatory frameworks, drawing parallels with European policies.	reasonable expectations on asset management and climate adaptation teams alike. The workshop
	energy users.	European policies.	promises a progressive learning journey,
			culminating in personal commitments to
2.20nm	Offshore Wind National Impacts Study	The Pole of Data Control in Poducing Carbon	sustainable excellence. Join us to lead New Zealand
2.30pm	AARON WEBB DIRECTOR, PWC	The Role of Data Centres in Reducing Carbon Impact	towards a low-carbon future through this powerful
	The National Impact Study for the New Zealand	ANDREW GREEN ASSOCIATE DIRECTOR DATA	exchange of knowledge and collaborative
	offshore wind industry provides a comprehensive	CENTRE BUSINESS, DATACOM	innovation.
	analysis of the potential economic, environmental,	Data centres are regularly in the news for their	
	energy, and community impacts of developing offshore	massive use of energy, but they're not the enemies	
	wind farms in New Zealand. In this session, we explore	of decarbonisation that they might at first seem.	
	the future uptake scenarios for offshore wind and the		
	important role it can play in the transformation of our	Andrew will take you through the growth and	
	energy system and economy. We explore the energy	changes he has seen in the industry, and a few that	
	trilemma outcomes of incorporating offshore wind in	we think are coming, as well as what data centre	
	our energy mix - including security of supply,	operators are constantly doing to reduce the	
	decarbonisation, and affordability – and the outcomes	impact of their operations, in turn enabling the	
	for local communities, Māori, and the natural	reduction of the carbon footprint of their	
	environment. Find a copy of the report <u>here</u> .	customers.	
3.00pm	A Practical Example of How Energy Users and	Decarbonising Covered Crop Vegetable Growers in	
5.00pm	Producers Can Collaborate to Best Support	New Zealand	
	Renewable Energy in New Zealand		

	(featuring BraveTrace, Lodestone Energy and The	ELLERY PETERS ENERGY ENGINEER, VEGETABLE		
	Warehouse Group)	NEW ZEALAND		
	SHAUN GOLDSBURY CEO, BRAVETRACE	A targeted decarbonisation pathway for covered		
	OLIVIA BARCLAY SUSTAINABILITY PARNTER, THE	crop growers began in 2019 because it was		
	WAREHOUSE GROUP	identified that these vegetable growers needed		
	SARAH MCHARDY GENERAL MANAGER -	support to decarbonise and future-proof their		
	CUSTOMER, LODESTONE ENERGY	industry. This presentation will cover the		
	The Warehouse Group and Lodestone Energy have	decarbonisation pathway and the new technologies		
	signed a landmark long-term deal, aiming to power	being implemented in greenhouses across the New		
	over 260 sites across Aotearoa with Lodestone's	Zealand to improve energy efficiency. This will lead		
	solar plants by 2026. Through the use of New	into a discussion on fuel switching and the potential		
	Zealand Energy Certificates (NZ-ECs), BraveTrace	of low temperature geothermal in vegetable		
	will verify that electricity consumed at The	growing. The final discussion point will be on the		
	Warehouse Group sites matches the solar energy	major and unique challenges facing the covered		
	generated from Lodestone. All parties aim to share	cropping industry.		
	insights on deal origination, arrangement			
	mechanics, how this incentivises increased			
	renewable energy generation, and carbon			
	outcomes. A short Q&A session will follow.			
3.30pm	Networking Break in the Industry Exhibition			
	Ground Floor Foyer			
	Session 4 Panel			
	Limes Room, Level 1			
	Energy Efficiency and Conservation Authority (EECA)			
	JO PARAG PARTNERSHIPS LEAD, ENERGY EFFICIEN	CY AND CONSERVATION AUTHORITY (EECA)		
4.00pm	Infrastructure Panel			
	TIM SPARKS DIRECTOR, NETWORK PRICING, ELECT			
	NIGEL BARBOUR GROUP CHIEF EXECUTIVE OFFICE			
	ANDREW GREEN ASSOCIATE DIRECTOR DATA CENT			
	MICHAEL JEFFERSON DIRECTOR, HEAD OF DEVELO			<u> </u>
4.45pm	Electrification Is the Win-Win for All New Zealanders			
	MIKE CASEY CHIEF EXECUTIVE, REWIRING AOTEAR			
		emissions. Rewiring Aotearoa released an Electric Hor	-	
		e incredible emissions reductions. Join Mike as he step	-	
		nake electrification easy for everyone. New Zealand wi	If be the first fully electric ec	onomy if we all work
5.20pm	together to make it happen. Day's Wrap and Invitation and Welcome to Network	ring Drinks		
5.20pm	DAN TOMLINSON HEAD OF MARKETS AND PARTN	-		
6.00pm	HON. SIMON WATTS MINISTER FOR CLIMATE CHA	•		
5.25pm – 7.30pm	Networking Function in Industry Exhibition Ground Floor Foyer		Proudly Sponsored by:	ESP

DAY 2: WEDNESDAY 29 MAY 2024

Christchurch Town Hall, Christchurch

3.30am Registration and Coffee			
	Session 5		
	Limes Room, Level 1		
9.00am	Housekeeping		
	TE RADAR MC		
9.05am	A Circular Approach to Recycling in Aotearoa's Energ	y Sector	
		IIEF SUSTAINABILITY OFFICER, PHOENIX RECYCLING GF	
		ructure; as we upgrade our energy assets we must ensu	
		s lithium, nickel, cobalt, graphite, copper, aluminium, st	
		re closely interconnected when we define what are the	
		naterials as an alternative source, we replace mined fini	
	profile to deliver these recycled materials; material by outcomes.	v material, project by project interrogates the methodo	logy and the supply chain for positive climate
9.35am		t: How Are the ICVCM's Core Carbon Principles Deliver	ing the Next, High-Integrity Chapter for VCMs
	Delivering Integrity for The Voluntary Carbon Market: How Are the ICVCM's Core Carbon Principles Delivering the Next, High-Integrity Chapter for VCMs ANNETTE NAZARETH CHAIR - GOVERNING BOARD, THE INTEGRITY COUNCIL - VOLUNTARY CARBON MARKET (ICVCM)		
	Annette will discuss the mission of the ICVCM, our benchmark standards for high-integrity carbon credits - the Core Carbon Principles (CCPs), and what our work		
	assess for adherence to the CCPs means for the carbon market, and those looking to purchase high-integrity CCP-labelled credits.		
10.05am	Climate-Related Transition Planning and GHG Assurance – What You Need to Know		
	KAREN TIPPER TECHNICAL DIRECTOR – ASSURANCE, XRB		
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	JACK BISSET POLICY MANAGER – SUSTAINABILITY,		
	JACK BISSET POLICY MANAGER – SUSTAINABILITY, Aotearoa New Zealand Climate Standards are designed	XRB d to encourage entities to measure and focus on climat	
	JACK BISSET POLICY MANAGER – SUSTAINABILITY, Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance	XRB Id to encourage entities to measure and focus on climat of the greenhouse gas disclosures increases the trust a	
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10.30am	JACK BISSET POLICY MANAGER – SUSTAINABILITY, Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance	XRB Id to encourage entities to measure and focus on climat of the greenhouse gas disclosures increases the trust a	
10.30am 10.50am	JACK BISSET POLICY MANAGER – SUSTAINABILITY, Aotearoa New Zealand Climate Standards are designe transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply your	XRB Id to encourage entities to measure and focus on climat of the greenhouse gas disclosures increases the trust a	
	JACK BISSET POLICY MANAGER – SUSTAINABILITY,Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply yourMEET THE EXHIBITORS	XRB Id to encourage entities to measure and focus on climat of the greenhouse gas disclosures increases the trust a	
	JACK BISSET POLICY MANAGER – SUSTAINABILITY, J Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply your MEET THE EXHIBITORS Networking Break in the Industry Exhibition Ground Floor Foyer Session 6a	XRB ed to encourage entities to measure and focus on climate of the greenhouse gas disclosures increases the trust a current skills and knowledge to support this. Session 6b	Session 6c Workshop
10.50am	JACK BISSET POLICY MANAGER – SUSTAINABILITY, A Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply your MEET THE EXHIBITORS Networking Break in the Industry Exhibition Ground Floor Foyer Session 6a Limes Room, Level 1	XRB ed to encourage entities to measure and focus on climate of the greenhouse gas disclosures increases the trust a current skills and knowledge to support this. Session 6b Victoria Room, Level 1	Session 6c Workshop Avon Room, Ground Floor
	JACK BISSET POLICY MANAGER – SUSTAINABILITY, J Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply your MEET THE EXHIBITORS Networking Break in the Industry Exhibition Ground Floor Foyer Session 6a Limes Room, Level 1 Orphan Child, Invisible Gorilla, Dung Beetle? The	XRB Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage encourage encourage Id to encourage encourage	Session 6c Workshop Avon Room, Ground Floor Tech-Powered Efficiency: Best Practices in IoT,
10.50am	JACK BISSET POLICY MANAGER – SUSTAINABILITY, J Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply your MEET THE EXHIBITORS Networking Break in the Industry Exhibition Ground Floor Foyer Session 6a Limes Room, Level 1 Orphan Child, Invisible Gorilla, Dung Beetle? The Power of Environmental Sector Associations to	XRB Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Session 6b Victoria Room, Level 1 Te Whatu Ora Counties Manukau's Energy Transition Strategy	Session 6c Workshop Avon Room, Ground Floor Tech-Powered Efficiency: Best Practices in IoT, Software, and Data for Energy and Emissions
10.50am	JACK BISSET POLICY MANAGER - SUSTAINABILITY, J Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply your MEET THE EXHIBITORS Networking Break in the Industry Exhibition Ground Floor Foyer Session 6a Limes Room, Level 1 Orphan Child, Invisible Gorilla, Dung Beetle? The Power of Environmental Sector Associations to Save The World	XRB Id to encourage entities to measure and focus on climate of the greenhouse gas disclosures increases the trust a current skills and knowledge to support this. Session 6b Victoria Room, Level 1 Te Whatu Ora Counties Manukau's Energy Transition Strategy GANESH SANKAR ENERGY MANAGER, TE WHATU	Session 6c Workshop Avon Room, Ground Floor Tech-Powered Efficiency: Best Practices in IoT, Software, and Data for Energy and Emissions Workshop (limited to 25 people)
10.50am	JACK BISSET POLICY MANAGER – SUSTAINABILITY, J Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply your MEET THE EXHIBITORS Networking Break in the Industry Exhibition Ground Floor Foyer Session 6a Limes Room, Level 1 Orphan Child, Invisible Gorilla, Dung Beetle? The Power of Environmental Sector Associations to Save The World CLARE FEENEY FOUNDER, STRATEGIC	XRB Id to encourage entities to measure and focus on climate of the greenhouse gas disclosures increases the trust a current skills and knowledge to support this. Session 6b Victoria Room, Level 1 Te Whatu Ora Counties Manukau's Energy Transition Strategy GANESH SANKAR ENERGY MANAGER, TE WHATU ORA COUNTIES MANUKAU	Session 6c Workshop Avon Room, Ground Floor Tech-Powered Efficiency: Best Practices in IoT, Software, and Data for Energy and Emissions Workshop (<i>limited to 25 people</i>) DAN TOMLINSON HEAD OF PARTNERSHIPS, ES
10.50am	JACK BISSET POLICY MANAGER – SUSTAINABILITY, J Aotearoa New Zealand Climate Standards are designed transition to a lower carbon economy. The assurance stakeholders. Join us to hear how you can apply your MEET THE EXHIBITORS Networking Break in the Industry Exhibition Ground Floor Foyer Session 6a Limes Room, Level 1 Orphan Child, Invisible Gorilla, Dung Beetle? The Power of Environmental Sector Associations to Save The World CLARE FEENEY FOUNDER, STRATEGIC ENVIRONMENTAL TRAINING HUB	XRB Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities to measure and focus on climate Id to encourage entities and knowledge to support this. Id to encourage entities and knowledge to support this. Id to encourage entities and knowledge to support this. Id to encourage entities and knowledge to support this. Id to encourage entities and knowledge to support this. Id to encourage entities and knowledge to support this. Id to encourage entities and knowledge to support this. Id to encourage entities and knowledge to support this. Id to encourage entities and knowledge to support this. Id to encourage end to encourage entities and knowledge to support the encourage entities and knowledge to encourage entities and knowledge encourage entities and knowledge encourage end to encourage end toe	Session 6c Workshop Avon Room, Ground Floor Tech-Powered Efficiency: Best Practices in IoT, Software, and Data for Energy and Emissions Workshop (limited to 25 people) DAN TOMLINSON HEAD OF PARTNERSHIPS, ES DENI ARCHER TEAM LEAD – CARBON
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	A ConCOVE-funded assessment showed CEP, Civil Contractors NZ, WasteMINZ and WaterNZ are active players in sustainability skills identification, prioritisation, development and delivery. But despite the high value government places on their input, the power of these associations to spearhead the development of scarce and economically vital environmental skills goes unnoticed and untapped. A little money would go a long way towards enabling them to deliver significantly more training. Phase 2 of the project will prepare a business case for funding this.	Currently, each year Counties Manukau consumes around 60GWh of energy, from both electricity and gas and emits around 10,000 tonnes of CO ₂ . By 2025, the collective energy efficiency initiatives underway at Middlemore Hospital, Manukau Health Park, and Pukekohe Hospital are projected to slash emissions by approximately 4,700 tonnes annually, constituting roughly 47% of total emissions.	Targeting operational managers and sustainability leaders, this workshop will address common challenges preventing commercial technology deployments from achieving desired efficiency gains, such as poor system design, lack of strategy, poor user engagement, data analysis gaps, system complexity, and incentive misalignment. Attendees will learn strategies for deploying metering, internet of things (IoT) infrastructure, productivity software, and data tools to enhance energy efficiency and sustainability, including continuous improvement cycles, data granularity, system and software
11.50am	Lessons From the Schools Coal Boiler Replacement Programme (CBRP)MARCUS BAKER MANAGING DIRECTOR, APRICUS ECOJOHN SHERIDAN PROGRAMME DIRECTOR, THE BUILDING INTELLIGENCE GROUPHear from the team delivering the Ministry of Education and EECA funded CBRP that has seen all the remaining coal boilers in NZ schools removed, replaced with renewable pellet boiler or heat pumps. We will share lessons learnt on the practical and organisational challenges at all levels of project delivery; the process for evaluating existing systems and building requirements; how the project responded with best availability technology; what opportunities for energy efficiency gains; big project wins in carbon reduction; cost per kW of installed capacity; efficiency of centralised programme administration; gains in quality control and system design standardisation; lessons learned. This will be a practical and comprehensive presentation focussed on the actual mahi of decarbonisation.	Challenges of Retrofitting Heat Pumps for Commercial Building Heating CAMERON STANLEY SENIOR OPTIMISATION ENGINEER, DETA Heat pumps are a low-carbon alternative to central boilers for heating commercial buildings. However, there are several technical challenges associated with retrofitting heat pumps to existing heating systems, primarily due to the high heating water return temperatures that are a legacy of the original heating infrastructure. This can significantly compromise the performance of a heat pump, leading to increased running costs and reduce carbon emissions reductions. This presentation explores this problem, discusses the heat pump solutions that are currently available and provides recommendations for how to maximise the efficiency of such systems.	cycles, data granularity, system and software alignment with sustainability goals, partner collaboration, and overcoming deployment obstacles. Practical takeaways include staged deployment strategies, scalability, verification, validation, and user engagement best practices.
12.20pm	Net Zero Emissions Gas Value Chain – A Credible Opportunity for The Industry PETER COX VICE PRESIDENT AND GLOBAL SUBSECTOR LEAD, UPSTREAM ONSHORE AND MIDSTREAM, WORLEY The IEA predicts that gas use is likely to remain close to peak levels for the next two decades and gas will be the second largest contributor to total global energy supply between now and 2050. Gas is a	An Integrated Approach to Decarbonising Our Built Environment JASON BRETHERTON TECHNICAL DIRECTOR - BUILDINGS, WSP NEW ZEALAND LIMITED Introducing an integrated suite of tools that can be used to evaluate both embodied carbon and operational carbon emissions by assessing comparative building materials and system topologies early in the design process. This	

GENESIS ENERGYPOLYTECHNIK BIOMASS ENERGY LTDDELIVERY, TOITÜ ENVIROCAREClimate change legislation sets net zero 2050 as the destination for New Zealand's transition. To achieve this, the economy will need to be 60% electrified, using 95% renewable electricity and, as always, households and businesses rightly expect that energy to be available 100% of the time.One of nature's miracles is that plants take water and carbon dioxide and transfer them, with the sur's energy, into oxygen and clean energy stored in the plant in the form of hydrocarbons and sugars.DELIVERY, TOITÜ ENVIROCARE JOSEPHINE RUDKIN-BINKS COMINER MANAGER - SUSTAINABILITY, ECOTRICL DELPHINE DAVID HEAD OF PARTNER BRAVETRACE Lifecycle carbon analysis allows organ unique insights into carbon use throug product or service lifecycle. Workshop will learn about the organisational beer residues, which, if used in energy plants, become one of the most abundant carbon-neutral energy sources.DELIVERY, TOITÜ ENVIROCARE JOSEPHINE RUDKIN-BINKS COMINER MANAGER - SUSTAINABILITY, ECOTRICL DELPHINE RUDKIN - BINKS COMINER MANAGER - SUSTAINAB		fundamental energy source in the energy transition and will continue to be as we move towards net zero so rather than trying to eliminate gas, we need to transform the industry to become net zero. We have all of the technology today to enable this to happen so this presentation summarises what a net zero Aotearoa gas industry could look like.	assessment allows scenario testing to inform decision making on the most effective approach to reduce both embodied carbon and operational emissions. The resultant solution can then be validated through the prescribed life cycle assessment methodologies with prior stakeholder buy-in and increased confidence in the resulting outcomes.	
Limes Room, Level 1Victoria Room, Level 1Avon Room, Ground Floor2.00pmTransfitning to a Portfolio of Lower Carbon Technologies at Hunty Power Station ANGUS JUDGE GENERAL MANAGER OPERATIONS, GENESIS ENERGY Climate change legislation sets net zero 2050 as the destination for New Zealand's transition. To achieve this, the economy will need to be 60% electrified, using 95% renewable electricity and, as always, households and businesses rightly expect that energy to be available 100% of the time.CHRISTIAN JIRKOWSKY GENERAL MANAGER, POLYTECHNIK BIOMASS ENERGY LTD One of nature's miracles is that plants take water and carbon dioxide and transfer them, with the sur's energy, into oxygen and clean energy stored in the plant in the form of hydrocarbons and sugars. households and businesses rightly expect that energy to be available 100% of the time.Whenever humans decide to use timber as the most abundant carbon-neutral energy sources.Uffex/Lew Vert HEAD OF SCIENCE AN DELIVERY, TOTI DENVIROCARE JOSEPHINE RUDKIN-BINKS COMMER MANAGER - SUSTAINABILITY, ECOTRICI DELIVIER VOID I HEAD OF PARTINE BRAVETRACE Lifecycle Carbon analysis allows organ unique insights into carbon use throug sustainable and environmentally friendly building material, we are left with by-products: biomass residues, which, if used in energy plants, become sources.Uffex/Lew Vertice BRAVETRACE Lifecycle Carbon Ansysis allows organ or due to respire leftwith by-products, including torrefied and carbonised biomass. Best practice examples of on the challenges of decarbonisation I were Zealand, Australia, and overses industry leaders will complete the speech.Avon Room, Ground Pior Lifecyle Carbon Assesment Worksho Lifecyle Carbon Assesment Worksho 	12.50pm		Proud	ly Sponsored by:
2.00pm Transitioning to a Portfolio of Lower Carbon Technologies at Huntly Power Station ANGUS JUDGE GENERAL MANAGER OPERATIONS, GENESIS ENERGY Transformation of Biomass Residues into Clean Energy and High-Value Products Lifecyle Carbon Assessment Worksho (limited to 25 people) Climate change legislation sets net zero 2050 as the destination for New Zealand's transition. To achieve this, the economy will need to be 60% electrified, using 95% renewable electricity and, as always, households and businesses rightly expect that energy to be available 100% of the time. One of nature's miracles is that plants take water and carbon dioxide and transfer them, with the plant in the form of hydrocarbons and sugars. Lifecyle Carbon Assessment Worksho (limited to 25 people) As intermittent renewable generation sources increase, these require firming during periods of low hydro, wind or solar. Genesis' strategy includes a commitment to transition Huntly Power Station to the Huntly Portfolio, a portfolio of technologies and fuels like batteries, biomass, flexible gas (as transitional fuel) and potentially new peaking capacity to provide the flexibility the system will need to support energy reliability requirements. This presentation will give examples of common types and forms of homass. Best practice examples for material, we are laft chinking torrefied and carbonised biomass. Best practice examples for move Zealand, Australia, and overseas industry leaders will complete the speech. We will facilitate discussion a over Zealand, Australia, and overseas industry leaders will complete the speech. Shoud We Burn the Trees? We will facilitate discussion a overseas and those new to life cycle approaches.			•	
Technologies at Hunty Power Station ANGUS JUDGE GENERAL MANAGER OPERATIONS, GENESIS EMERGY Climate change legislation sets net zero 2050 as the destination for New Zealand's transition. To achieve this, the economy will need to be 60% electrified, using 95% renewable electricity and, as always, households and businesses rightly expect that energy to be available 100% of the time.Energy and High-Value Products Climate change legislation sets net zero 2050 as the destination for New Zealand's transition to the plant in the form of hydrocarbons and sugars.[/imited to 25 people] ZOE BURKITT HEAD OF SCIENCE AN DELIVERY, TOITO ENVIROCARE DOEDPHINE RUDKIN-BINKS COMMER MANAGER - SUSTAINABILITY, ECOTRICI DELPHINE DAVID HEAD OF PARTINER BRAVETRACE Lifecycle carbon analysis allows organ unique insights into carbon use throug product or service lifecycle. Workshop will four solar. Genesis' strategy includes a commitment to transition Huntly Power Station to the Huntly Portfolio, op totenhologies and fuels like batteries, biomass, flexible gas (as a transitional fuel] and potentially new peaking capacity to provide the flexibility trequirements.Energy and High-Value Products to moto yeas and forms of biomass residues and how four leading technologies for utiling forest and wood processing residues for heat, power, and high-value products, including torrefied and carbonised biomass. Best practice examples from New Zealand, Australia, and overseas industry leaders will complete the speech.[/imited to 25 people] ZOE BURKITT HEAD OF SCIENCE AN DELVERN, CONTECH MIKE PHARO J SENIOR ASSOCIATE - INDUSTRIAL2.30pmTeaming the state of the S				
KEITH SCOLES ENERGY SOLUTIONS ARCHITECT, MIKE PHARO SENIOR ASSOCIATE - INDUSTRIAL		 Technologies at Huntly Power Station ANGUS JUDGE GENERAL MANAGER OPERATIONS, GENESIS ENERGY Climate change legislation sets net zero 2050 as the destination for New Zealand's transition. To achieve this, the economy will need to be 60% electrified, using 95% renewable electricity and, as always, households and businesses rightly expect that energy to be available 100% of the time. As intermittent renewable generation sources increase, these require firming during periods of low hydro, wind or solar. Genesis' strategy includes a commitment to transition Huntly Power Station to the Huntly Portfolio, a portfolio of technologies and fuels like batteries, biomass, flexible gas (as a transitional fuel) and potentially new peaking capacity to provide the flexibility the system will need to support energy reliability requirements. 	 Energy and High-Value Products CHRISTIAN JIRKOWSKY GENERAL MANAGER, POLYTECHNIK BIOMASS ENERGY LTD One of nature's miracles is that plants take water and carbon dioxide and transfer them, with the sun's energy, into oxygen and clean energy stored in the plant in the form of hydrocarbons and sugars. Whenever humans decide to use timber as the most sustainable and environmentally friendly building material, we are left with by-products: biomass residues, which, if used in energy plants, become one of the most abundant carbon-neutral energy sources. This presentation will give examples of common types and forms of biomass residues and show four leading technologies for utilising forest and wood processing residues for heat, power, and high-value products, including torrefied and carbonised biomass. Best practice examples from New Zealand, Australia, and overseas industry leaders will complete the speech. 	(limited to 25 people) ZOE BURKITT HEAD OF SCIENCE AND ADVISORY DELIVERY, TOITŪ ENVIROCARE JOSEPHINE RUDKIN-BINKS COMMERCIAL MANAGER – SUSTAINABILITY, ECOTRICITY DELPHINE DAVID HEAD OF PARTNERSHIPS, BRAVETRACE Lifecycle carbon analysis allows organisations unique insights into carbon use throughout any product or service lifecycle. Workshop attendees will learn about the organisational benefits and multipliers gained through LCA processes. This session will focus on the energy sector, including circular thinking towards beneficial uses of wastes as feedstocks as well as other sources of renewable energy. We will facilitate discussion and exploration of the challenges of decarbonisation using the life cycle lens and encourage active participation from both those with organisational experience of these techniques and those new to life cycle carbon
IVAN LUKETINA ENERGY AND MARKETS INSIGHT LEAD, ORION NEW ZEALAND LTDThis session will delve into the sustainability credentials of biomass as a fuel and its role inThe transition to a low-carbon economy requires a rapid electrification of various sectors, such asclimate change mitigation. We will explore the differences between using old growth forests versus	2.30pm	KEITH SCOLES ENERGY SOLUTIONS ARCHITECT, ORION NEW ZEALAND LTD IVAN LUKETINA ENERGY AND MARKETS INSIGHT LEAD, ORION NEW ZEALAND LTD	MIKE PHARO SENIOR ASSOCIATE - INDUSTRIAL SUSTAINABILITY, BECA This session will delve into the sustainability credentials of biomass as a fuel and its role in climate change mitigation. We will explore the	

	transport, heating, and industry. This poses significant challenges and opportunities for network owners, who need to balance the future potential increase in demand for electricity with the diverse needs and expectations of their customers and stakeholders. In this presentation, we share our experience as a network owner in New Zealand, where we are learning about approaching our future with a new set of eyes to inform our strategic decisions initially informed by work with EECA/RETA on process heat conversions. We explain how we recognised the need for a different way of working with our customers to understand their energy journey, taking into account the factors that we needed to influence to shift our approach and at the same time, balancing this with Orion's energy journey. We also highlight the benefits of using data and ensure better outcomes can be understood and realised along with the challenges of unlocking that data. We conclude with some recommendations and insights for other network owners who are facing similar issues in the transition to a low-carbon future.	plantation forests for bioenergy, advocating for the preservation of ancient forests and sustainable harvesting of plantation forests. Then, through simplified life cycle analyses of different forest management scenarios—ranging from structural, bioenergy to permanent forestry— the session will underline how each scenario contributes to climate change mitigation. The goal of the presentation is to provide some clarity on 'good' vs. 'bad' biomass and reveal some (hopefully) unexpected findings.	
3.00pm	Towards A Green Industry Sector: Decarbonising the Industrial Sector in Germany and Cooperation Potential with New Zealand FRANZISKA TEICHMANN HEAD OF THE GERMAN SECRETARIAT FOR THE ENERGY COOPERATION WITH AUSTRALIA AND NEW ZEALAND, ADELPHI The decarbonisation of the manufacturing sector is key to reaching climate neutrality in Germany by 2045. The presentation will give an update on the progress so far, successful policies, the role of hydrogen and recent innovative initiatives like the Carbon Contracts for Difference to support transformation projects of German enterprises. Through the Germany-New Zealand Energy Dialogue, the German Government supports activities to foster cooperation to advance the energy transition and decarbonisation in both Germany and New Zealand. A few recommendations for cooperation opportunities	Opportunities for Biomethane as a Substitute for Natural Gas PETER SANDSTON COMMERCIAL LEAD, CLARUS FIRST RENEWABLES Biogas produced by anaerobic digestion of organic material can be upgraded to biomethane which can be a 100% drop-in replacement for natural gas. The first facility for upgrading biogas to biomethane is being built at the Ecogas Reporoa Organics Processing Facility. This presentation will explore opportunities to replicate the project with biomethane projects in other regions.	

	will be presented, that are the result of a comparative study of the manufacturing sectors in
	both countries.
3.25pm	Networking Break in the Industry Exhibition
	Ground Floor Foyer
	Session 8
	Limes Room, Level 1
4.00pm	Student Prizegiving
4.05pm	Getting to 100% Renewables
	AL YATES FOUNDER AND CEO, ECOTRICITY
	Accelerating the transition to 100% Renewables. What's happening on the ground, hilltops and rooftops to get there. The current challenges and technical
	solutions that are here and now.
4.40pm	Conference Reflections / Wrap up
4.45pm	Conference Close

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