PRELIMINARY PROGRAMME
As at 12 April 2024

DAY 1: TUESDAY 28 MAY 2024
Christchurch Town Hall, Christchurch

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

8.00am	**Registration and Coffee** **Ground Floor Foyer**	
	Session 1 | Conference Opening and Welcome **Limes Room, Level 1**	
9.00am	**Mihi Whakatau** **DAVE BRENNAN**	
9.10am	**Welcome and Housekeeping** **TE RADAR | MC**	
9.15am	**Welcome to Christchurch** **MAYOR PHILIP MAUGER | MAYOR OF CHRISTCHURCH**	
9.20am	**Title TBC** **BRIAN MOTHERWAY | HEAD OF THE OFFICE OF ENERGY EFFICIENCY AND INCLUSIVE TRANSITIONS, INTERNATIONAL ENERGY AGENCY**	
10.20am	**Scaling-Up Renewable Gas Production and Use in Aotearoa** **BEN GERRITSEN | GENERAL MANAGER CUSTOMER AND REGULATORY, CLARUS** 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 opportunities. What feedstocks are available to supply production facilities? What are the main use cases for renewable gas in New Zealand and how might 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?	
10.45am	**MEET THE EXHIBITORS**	
11.10am	**Networking Break in the Industry Exhibition** **Ground Floor Foyer**	
	Session 2a | **Limes Room, Level 1**	**Session 2b | Panel** **Victoria Room, Level 1**
11.40am	**A Net-Zero Carbon Concrete Industry: A Sustainable Future for the World's Most Widely Used Construction Material** **ROB GAIMSTER | CHIEF EXECUTIVE OFFICER, CONCRETE NZ** The New Zealand concrete industry has unveiled its transformative 2050 roadmap, outlining a plan to achieve net-zero carbon emissions and drive	**Lessons Learned and Best Practice for Heat Pump Integration – Panel** **JONATHAN POOCH | DETA** **MATT MARSHALL | DETA** **JACK YOUNG | ENGINEERING MANAGER, ENERGY NZ** **JACK TIMINGS | PROCESS ENGINEER, BECA**

	sustainability. This paper offers valuable insights for carbon and energy professionals on the ambitious but achievable decarbonisation pathway. In the face of the pressing climate crisis, the concrete industry recognizes its role in mitigation and adaptation efforts. The roadmap emphasizes collaboration with all construction stakeholders, carbon and energy professionals included, to translate vision into reality. Together, we can work towards a sustainable future, where concrete help to reduce carbon emissions and build a resilient world.	**ADRIAN DICKISON | TECHNICAL FELLOW, BECA** This panel builds upon the workshop from CEP23 (Identifying heat pump opportunities), as a session on lessons learned and reflections from real-world heat pump projects. This interactive panel, discussion and workshop will cover the following: • Preliminary and detailed design. • Equipment specification. • Integration. • Operation and optimisation. • A look to the future of heat pump technology in New Zealand. Participants are encouraged to bring questions and join in on the kōrero, as panellists share their experience and thoughts from delivering projects across New Zealand.
12.10pm	**Finding A Way to Decarbonisation – Eradicating Fossil Fuel Derived Process Heat** **ROSS GODKIN | NATIONAL MANUFACTURING MANAGER, ROAD SCIENCE** Showcasing the real-world application of overcoming the challenges involved in moving away from fossil fuel derived Process Heat to renewable energy. It involves our journey of investigating like-for-like replacement, then downsizing of process heat peak demand, by thinking differently. This resulted in changing how we mode the operation which reduced peak energy demand from 1.3 MW to 200KW to work within our existing supply capacity.	
12.40pm	**STUDENT PAPERS** **Intelligent Knowledge-Based Decision Support System for Assessing the Data Quality Assurance of Environmental Product Declaration for Whole Building Life 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-Performance 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 | ISABELLA PIMENTEL PINCELLI**	
1.05pm	**Networking Break in the Industry Exhibition** **Ground Floor Foyer**	
	Session 3a | **Limes Room, Level 1**	**Session 3b |** **Victoria Room, Level 1**	**Session 3c | Workshop** **Avon Room, Ground Floor**
2.00pm	**How to Build on the Step Change of 2023** **EECA** Carrying out decarbonisation projects is not easy. Over the past two years we have seen NZ firsts and world firsts, with tireless project teams who need to be celebrated. This year, EECA has been gathering data and insights across completed decarbonisation projects so we can share patterns and lessons with the industry. This presentation	**Unlock the Potential of Green Information Technology in New Zealand: A Journey Towards Sustainable Computing** **JEAN-PHILIPPE EHRET | GREENIT EXPERT AND FOUNDER, BETTERBYTES** Unveil the potential of Green IT with Jean-Philippe Ehret from BetterBytes, championing sustainable IT practices in New Zealand. Jean-Philippe provides an overview of Green IT's challenges and	**Laying Foundations to Realise Sustainable Asset Management and Carbon Accounting Practices in NZ** ***(limited to 25 people)*** **PRIYANI DE SILVA-CURRIE | TECHNICAL DIRECTOR/PRINCIPAL - ASSET ADVISORY, BECA** **HELEN HOLYOAK | CAKE TIME** Evolving societal, economic, environmental & regulatory expectations in NZ will see asset

	will cover some of those insights. It will also share RETA data, modelling and information that has become evident with reports complete across all South Island regions. This includes changing fuel and abatement profiles, improving project economics, and better information about future energy needs and locations. Lastly, Nicki will share work EECA has been doing to refresh its strategy, including electrifying New Zealand and empowering energy users.	opportunities, emphasizing its pivotal role in conserving resources and curbing GHG emissions, projected to surpass car emissions by 2025. Delve into real-world successes like the Hawke's Bay Regional Council pilot, showcasing tangible outcomes in addressing environmental challenges while reducing operational costs. Explore disruptive technology, energy-efficient computing, eco-design, and sustainable procurement practices. Discover how to leverage unparalleled data store to drive sustainability in IT operations. Gain valuable insights into regulatory frameworks, drawing parallels with European policies.	managers and infrastructure professionals becoming connectors and operational implementers of sustainable strategies as carbon & asset management are woven together. This workshop invites you to explore the introduction of indigenous approaches alongside traditional methodologies to support sustainable infrastructure decision making and lifecycle investment. We hope you will share knowledge and challenges on your own journey and we aim to leave you feeling enlightened about how to place reasonable expectations on asset management and climate adaptation teams alike. The workshop promises a progressive learning journey, culminating in personal commitments to sustainable excellence. Join us to lead New Zealand towards a low-carbon future through this powerful exchange of knowledge and collaborative innovation.
2.30pm	**Offshore Wind National Impacts Study** **AARON WEBB | DIRECTOR, PWC**	**The Role of Data Centres in Reducing Carbon Impact** **ANDREW GREEN | ASSOCIATE DIRECTOR DATA CENTRE BUSINESS, DATACOM** Data centres are regularly in the news for their massive use of energy, but they're not the enemies of decarbonisation that they might at first seem. I'll take you through the growth and changes I've seen in the industry, and a few that we think are coming, as well as what data centre operators are constantly doing to reduce the impact of their operations, in turn enabling the reduction of the carbon footprint of our customers.	
3.00pm	**A Practical Example of How Energy Users and Producers Can Collaborate to Best Support Renewable Energy in New Zealand** **SHAUN GOLDSBURY | CEO, BRAVETRACE** **OLIVIA BARCLAY | SUSTAINABILITY PARNTER, THE WAREHOUSE GROUP** **SARAH MCHARDY | GENERAL MANAGER, LODESTONE ENERGY** The Warehouse Group and Lodestone Energy have signed a landmark long-term deal, aiming to power over 260 sites across Aotearoa with Lodestone's solar plants by 2026. Through the use of New Zealand Energy Certificates (NZ-ECs), BraveTrace will verify that electricity consumed at The Warehouse Group sites matches the solar energy generated from Lodestone. All parties aim to share	**Decarbonising Covered Crop Vegetable Growers in New Zealand** **ELLERY PETERS | ENERGY ENGINEER, VEGETABLE NEW ZEALAND** A targeted decarbonisation pathway for covered crop growers began in 2019 because it was identified that these vegetable growers needed support to decarbonise and future-proof their industry. This presentation will cover the decarbonisation pathway and the new technologies being implemented in greenhouses across the New Zealand to improve energy efficiency. This will lead into a discussion on fuel switching and the potential of low temperature geothermal in vegetable growing. The final discussion point will be on the	

	insights on deal origination, arrangement mechanics, how this incentivises increased renewable energy generation, and carbon outcomes. A short Q&A session will follow.	major and unique challenges facing the covered cropping industry.	
3.30pm	**Networking Break in the Industry Exhibition** **Ground Floor Foyer**		
	Session 4 | Panel **Limes Room, Level 1**		
4.00pm	Infrastructure Panel		
4.45pm	**Electrification Is the Win-Win for All New Zealanders** **MIKE CASEY | CHIEF EXECUTIVE, REWIRING AOTEAROA** Electrification is the low-hanging fruit of our national emissions. Rewiring Aotearoa released an Electric Homes report which outlines the true economic benefit of electrifying all machines in our homes as well as the incredible emissions reductions. Join Mike as he steps through the economic benefits for our homes and some of the work we now need to do as a nation to make electrification easy for everyone. New Zealand will be the first fully electric economy if we all work together to make it happen.		
5.20pm	**Day's Wrap and Invitation and Welcome to Networking Drinks**		
6.00pm	**HON. SIMON WATTS | MINISTER FOR CLIMATE CHANGE AND REVENUE**		
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

8.30am	**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 Energy Sector** **HILARY WEST-REEVE | DIRECTOR AND CHIEF SUSTAINABILITY OFFICER, PHOENIX– METALMAN REYCLYING**		
9.35am	**Title TBC** **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 to assess for adherence to the CCPs means for the carbon market, and those looking to purchase high-integrity CCP-labelled credits.		
10.15am	**Climate-Related Transition Planning and GHG Assurance – What You Need to Know** **KAREN TIPPER | TECHNICAL DIRECTOR – ASSURANCE, XRB** **JACK BISSET | POLICY MANAGER – SUSTAINABILITY, XRB** Aotearoa New Zealand Climate Standards are designed to encourage entities to measure and focus on climate related risks and opportunities and disclose their transition to a lower carbon economy. The assurance of the greenhouse gas disclosures increases the trust and confidence in this information for investors and stakeholders. Join us to hear how you can apply your current skills and knowledge to support this.		
10.50am	**Networking Break in the Industry Exhibition** **Ground Floor Foyer**		
	Session 6a | **Limes Room, Level 1**	**Session 6b |** **Victoria Room, Level 1**	**Session 6c | Workshop** **Avon Room, Ground Floor**
11.20am	**Orphan Child, Invisible Gorilla, Dung Beetle …? The Power of Environmental Sector Associations to Save The World** **CLARE FEENEY | FOUNDER, STRATEGIC ENVIRONMENTAL TRAINING HUB** CEP is working hard to deliver the professional skills needed to deliver the nations' construction, infrastructure and environmental goals. 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.	**Te Whatu Ora Counties Manukau's Energy Transition Strategy** **GANESH SANKAR | ENERGY MANAGER, TE WHATU ORA COUNTIES MANUKAU** Te Whatu Ora Counties Manukau's Energy Transition Strategy aiming to achieve New Zealand Government's target of carbon neutral public sector by 2025. 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	**Tech-Powered Efficiency: Best Practices in IoT, Software, and Data for Energy and Emissions Workshop *(limited to 25 people)*** **DAN TOMLINSON | HEAD OF MARKETS AND PARTNERSHIPS, ESP** **MICHAEL WELZEL | IQNEXUS** **DENI ARCHER | TEAM LEAD – CARBON CONSULTING, ESP** 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

	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.	emissions by approximately 4,700 tonnes annually, constituting roughly 47% of total emissions.	of things (IoT) infrastructure, productivity software, and data tools to enhance energy efficiency and sustainability, including continuous improvement 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.
11.50am	**Lessons From the Schools Coal Boiler Replacement Programme (CBRP)** **MARCUS BAKER | MANAGING DIRECTOR, APRICUS ECO** **JOHN SHERIDAN | THE BUILDING INTELLIGENCE GROUP** **MINISTRY OF EDUCATION** Hear 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 | DETA** Discusses the technical challenges associated with matching heat pump to the existing heating system, primarily due to the high heating water return temperatures that are a legacy of the original heating infrastructure.	
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 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.	**An Integrated Approach to Decarbonising Our Built Environment** **JASON BRETHERTON | TECHNICAL DIRECTOR, WSP**	

12.50pm	Networking Break in the Industry Exhibition Ground Floor Foyer		
	Session 7a | **Limes Room, Level 1**	**Session 7b |** **Victoria Room, Level 1**	**Session 7c | Workshop** **Avon Room, Ground Floor**
2.00pm	**TBC**	**Transformation of Biomass Residues into Clean 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. Christian's 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.	**Lifecyle Carbon Assessment Workshop** ***(limited to 25 people)*** **ZOE BURKITT | TOITŪ ENVIROCARE** Further details to come
2.30pm	**Early Days Energy Transition Findings** **KEITH SCOLES | ENERGY SOLUTIONS ARCHITECT, ORION NEW ZEALAND LTD** **IVAN LUKETINA | ENERGY AND MARKETS INSIGHT LEAD, ORION NEW ZEALAND LTD** The transition to a low-carbon economy requires a rapid electrification of various sectors, such as 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.	**Should We Burn the Trees?** **MIKE PHARO | ASSOCIATE PROCESS ENGINEER - INDUSTRIAL DECARBONISATION, 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 differences between using old growth forests versus 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	

	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.	of the presentation is to provide some clarity on 'good' vs. 'bad' biomass and reveal some (hopefully) unexpected findings.	
3.00pm	**Cooperation Potential Between Germany and New Zealand in Decarbonizing the Manufacturing Sector** **GERMAN-NEW ZEALAND CHAMBER OF COMMERCE** This study, conducted by the German-New Zealand Chamber of Commerce and Adelphi, investigates the potential for cooperation between Germany and New Zealand in decarbonizing their manufacturing sectors, which are significant sources of greenhouse gas emissions in both countries. In 2022, the manufacturing sector was responsible for 22% of Germany's emissions, making it the second-largest source after the energy sector. Similarly, in New Zealand, the manufacturing sector, excluding utilities and construction, accounted for 13% of emissions, also ranking as the second-largest emitter following the primary sector. The report provides a detailed overview of the current industrial landscapes in Germany and New Zealand, focusing on energy consumption and emission outputs. It also examines the existing policy frameworks aimed at emission reduction in both countries, including CO2 regulations, incentive systems, and funding schemes. Moreover, the study identifies potential areas for collaboration between	**Practical Challenges and Opportunities for Biomethane as A Substitute for Natural Gas** **PETER SANDSTON | COMMERCIAL ADVISOR, 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 discuss the practical challenges in developing this first-of-its-kind project in New Zealand, including changes to pipeline regulations and gas specification. The presentation will also explore opportunities to replicate the project with biomethane projects in other regions.	

	industries and governments, emphasizing policy, economic, and technical cooperation. By presenting a comprehensive analysis of the status quo and highlighting future cooperation opportunities, the report aims to inform policymakers and industry experts about the critical role of bilateral partnerships in advancing the decarbonization of the manufacturing sector.		
3.25pm	**Networking Break in the Industry Exhibition** **Ground Floor Foyer**		
	Session 8 | **Limes Room, Level 1**		
4.00pm	**TBC**		
4.35pm	**Student Prizegiving**		
5.05pm	Conference Reflections / Wrap up		
5.10pm	**Conference Close**		