

**“Yes We Can !” Achieve
the Greenhouse Gas
Emission Reduction
Targets symposium**

Who’s Who at the Forum

**31 May 2016
InterContinental Wellington
2 Grey Street, Wellington**

Stakeholders and Event Sponsors

The stakeholder low carbon organisations behind this initiative are:



The symposium is sponsored by the following:

| | | | | |
|----------|--|--|---|---|
| Platinum |  MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT HĪKINA WHAKATUTUKI | Absolutely Positively Wellington City Council Me Heke Ki Pōneke | | |
| Gold |  |  |  | |
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| Bronze |  |  |  |  |
| |  |  |  | |



<http://www.awatea.org.nz>

Aotearoa Wave and Tidal Energy Association

New Zealand's marine energy resource is huge. The energy in the tidal flow of the Cook Strait is capable of supplying two times NZ's present electricity requirements, and the wave energy resource is also of this order. An equivalent amount of energy to one utility scale wind turbine is dissipated from wave energy along every 100 m of the western coast of NZ.

Marine energy also has benefits in terms of security of supply and a diversified electricity system. Clearly the tides are highly predictable years in advance, while waves may be forecast with considerable accuracy a number of days in advance. These resources offer variable but predictable power.

Technologies to convert this abundant marine energy have been proven and are now maturing, especially in the case of tidal turbines. The world's first commercial tidal array is in development in Scotland and considerable effort is being expended to bring costs down.

The Aotearoa Wave and Tidal Energy Association exists to advocate for, assist and accelerate the development of the marine energy industry in NZ. Utility-scale generation should be seen as a medium-term proposition for NZ, but with preparation starting in the short-term.



www.bioenergy.org.nz

Bioenergy – the future, naturally

About us

The Bioenergy Association helps its members to develop and grow their bioenergy businesses, raises awareness of the benefits of bioenergy and provides the latest information about the bioenergy sector, both in New Zealand and internationally. Bioenergy Association membership is open to anyone with a commercial interest in bioenergy.

There are three special topic interest groups open to any Bioenergy Association member, each with its own committee and topic webpage:

- Biogas - <http://www.biogas.org.nz>
- Liquid Biofuels - <http://www.liquidbiofuels.org.nz>, and
- Wood energy - <http://www.usewoodfuel.org.nz>

Vision

The Association's vision is for 25 percent of New Zealand's consumer energy supply to be from bioenergy by 2040 including 30 percent of transport fuel coming from biomass and organic waste.

Contact us

Executive Officer

Brian Cox

brian.cox@bioenergy.org.nz

Mob: 0274 771048



<http://www.businessnz.org.nz>

BusinessNZ is committed to New Zealand's success – sustainable growth through free enterprise. Advocating for enterprise and promoting the voice of thousands of businesses across New Zealand, we work for positive change through new thinking, productivity and innovation. Our unique strength lies in our capability to engage with government officials, community groups, MPs and Ministers on a daily basis, ensuring business interests are represented throughout the policy making process. What we do affects all New Zealanders, because when business is going well, it affects the wellbeing of our economy, our environment, our jobs, our communities, our families and our futures.

The BusinessNZ Energy Council, a division of BusinessNZ, is a group of New Zealand organisations taking on a leading role in creating a sustainable energy future for New Zealand. The BEC is the New Zealand Member Committee of the World Energy Council (WEC).



<http://driveelectric.org.nz>

Purpose

Drive Electric is a leadership organisation at the core of the emerging electric vehicle industry in New Zealand.

We are motivated to help New Zealand realise the health, environmental and economic benefits from accelerated and orderly uptake of plug-in electric vehicles and associated infrastructure.

Our Message

Many places around the world are experiencing high growth in the uptake of electric vehicles, and yet, despite New Zealand having one of the strongest business cases for wide-spread adoption of electric mobility, we barely make it onto the list!

The points below list some of the key ways a transition to electric mobility will benefit the people of New Zealand, our economy and our country as a whole:

- Reduced oil imports will improve our balance of payments
- More jobs with increased investment in local energy generation
- Start moving towards energy independence for a secure energy future
- Provide a sustainable new load at a time when electricity demand is falling
- Improve air quality in our cities with corresponding health implications
- Support the "100% Pure" image that benefits many NZ industries
- Give our politicians a card to play in climate negotiations



<http://www.emanz.org.nz>

EMANZ supports its members through a range of activities that raise skills, knowledge and all-round competence in energy management.

EnergyMasters is EMANZ's brand that recognises individuals who have met the highest levels of competency standards as set by their peers in the relevant field of expertise.

EMANZ was formed in 1993, as a "Collaborating Technical Society of the Institute of Professional Engineers New Zealand (IPENZ)" and is an Incorporated Society and

Aims

- To promote the highest standards of Energy Management skills and competence
- To foster and facilitate the integration of sound Energy Management practices into all sectors of the New Zealand economy.
- To provide a forum for the discussion of Energy Management issues, skills and techniques
- To develop practical Energy Management policy proposals and represent these where appropriate.



<http://fica.org.nz>

Contractors working smarter

Learn more about the Forest Industry Contractors Association from their website <http://fica.org.nz>



<http://www.nzfoa.org.nz>

The New Zealand Forest Owners Association (FOA) represents the owners of New Zealand's commercial plantation forests. It was set up in 1926 and is now one of the country's most influential primary sector organisations.

Its members own or manage around two-thirds of the country's 1.79 million hectares of plantation forests and are responsible for over 80% of the annual harvest.

With annual export earnings of \$4.7 billion in 2011/12, plantation forestry is New Zealand's third largest export earner. It is a major regional employer, with 6500 individuals employed in forestry and logging in 2010, and 17,615 employed in forestry and first stage processing.

Investment by members in research and technology, supported by the NZ government, means plantation forestry is highly innovative. This is reflected in the commitment of the association and its members to the highest standards of sustainable silviculture, environmental practice and workforce safety.

In recent years this has led to the development of codes of practice and standards which have world-leader status. These codes and standards have been adopted by most industry players.



<http://www.generationzero.org>

Generation Zero is a nationwide, youth-led, volunteer organisation founded in 2011. Our vision is to see New Zealand leading the transition to a zero carbon future, and building a better future beyond fossil fuels. We advocate for action at the national and local levels to support our vision. We currently have over 30,000 online supporters, with volunteers active in Auckland, Hamilton, Wellington, Christchurch and Dunedin.

Since its inception, Generation Zero has pushed for ambitious national emissions targets and a credible and comprehensive plan to meet them. Transport has been a particular focus area due to its prominence in New Zealand's greenhouse gas emissions profile. Generation Zero has advocated for and proposed public and active transport solutions, compact urban development, and other policies to reduce transport emissions.



<http://www.geothermalnewzealand.com>

Geothermal New Zealand is an evolving collaboration that extends the diverse skills of New Zealand's geothermal expertise to countries exploring their geothermal potential, moving beyond the traditional consultancy support for which New Zealand is already well recognised.

Geothermal New Zealand facilitates introductions to experts at every stage of geothermal development, applying international best practices in exploration, resource confirmation, feasibility, design and procurement, construction, commissioning and operations. Click [here](#) for details.

Geothermal New Zealand is represented at this workshop by Beca Ltd. Established in 1918, Beca is an engineering and related services consultancy with approximately 3000 employees and offices located across the Asia-Pacific region.

Beca operates across a range of business sectors, including buildings, water, power, government, industrial and transportation. The consultancy offers planning, project management, engineering, architecture, applied technologies, cost management and valuation services, among others.

Beca's power clients are at the forefront of energy generation and transmission in New Zealand, delivering power from alternative energy sources such as wind farms, hydro dams and geothermal resources. Beca has delivered utility scale solar PV projects in the Pacific, and large-scale projects in Asia that contribute to the development and use of environmentally sustainable design. An example of this is Singapore's Zero Energy Building, a retrofitted office complex which aims to generate as much energy from renewable sources as it uses, leading to net zero energy consumption. For more details, click [here](#).



<https://www.hera.org.nz/MainMenu>

Serving the New Zealand metals industry

HERA is a not for profit, creating value through collaboration, education and support by delivering a trusted national center for product design, manufacturing technology, inspection and quality assurance with a focus on heavy engineering.

Our commitment to help our 650+ members stay one step ahead is strengthened by our vision to be the leading catalyst for metals innovation internationally.

Our specialists in research, industry development, training, advocacy and marketing allow us to partner with our members and clients across the globe – to create opportunity and lead bigger picture thinking. Industry owned. Member driven. Future focused.

A closer look... Clean energy continues to drive our research and development programs - connecting our member's expertise and manufacturing capability with transformational projects that make a real difference.

From its inception, our AGGAT program in above-ground geothermal and allied technology has invested strongly in evolving the Organic Rankin Cycle. We're leveraging a shared research base to address the growing need to make renewable energy resources more accessible and affordable, while reducing our carbon footprint.

We also see great potential in the ocean. Capturing the power of waves and tides could greatly influence how we interact with the natural environment - and stimulating technological advances in marine energy as a potential commercial power source continues to be focus we work strongly to build.

Exploring the generation of clean energy has so far delivered exciting results – and we're poised to put New Zealand on the map and create export opportunities.



<http://www.neri.org.nz>

Energy Research for the benefit of New Zealand

Many of New Zealand's significant economic, environmental and social challenges are directly related to energy. These include business productivity; energy security; household needs and energy poverty; the opportunities from energy technologies; energy efficiency; demand-side management; future transport systems; and an increasing global expectation of greenhouse gas reductions. This complex web of inter-related challenges requires a strong research base to allow energy users and policy makers to make well informed long-term decisions, and to help households and industry to have access to a world leading energy system and energy technologies.

It is in this space, representing NZ energy research providers that NERI operates. NERI's purpose is to: encourage high quality energy research focused on NZ's medium-term needs, helping that to be well coordinated and linked with potential users, and to encourage the uptake of that research, whether commercially, by communities, or policy makers.

NERI is in the process of working with interested stakeholders to develop an energy research agenda for New Zealand. If you would like to have input, please contact Simon Arnold, CEO NERI, simon@neri.org.nz, 027 248 1753.



<http://www.nzbio.org.nz>

Our vision is for a New Zealand that has a supportive and sustainable environment which enables companies employing biotechnology to advance their commercial interests and ultimately facilitate the growth of New Zealand's businesses in the global market.

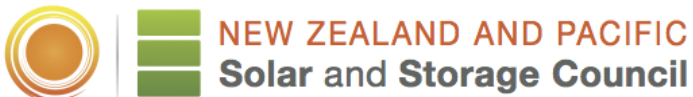
New Zealand has a thriving and globally recognised bio economy, ranked eighth in the world in 2014. NZBIO is the leadership forum that proactively and strategically enables the development and promotion of New Zealand's biotechnology industry.

Our goal is to lead the world in providing modern biotechnology products. The ultimate results of these technologies reduces our environmental footprint, reduces world hunger, uses less energy, combats debilitating and rare diseases, and produces more efficient and cleaner manufacturing processes.

With our proximity to Asia and close links with biotech powerhouses such as USA, Singapore and Australia, the biotech industry is very well positioned to bring significant benefits to the New Zealand economy.

NZBIO is the sector's leading representative and advocate, and as such acts as enabler, influencer, direction setter and the critical network hub across the broad spectrum of biotechnology disciplines.

Our mission is to maximise your opportunities to network, learn and grow.



<https://www.nzpssc.org.nz>

Serving the New Zealand metals industry

The NZ & Pacific Solar and Storage Council Inc exists to promote scientific, social and economic development through the environmentally sound use of solar energy. It's priority workstreams are to:

- encourage the development of common standards and installation best practice across the Pacific region, by providing policy advocacy and advice on best practice on solar and storage solutions to regional utilities, national governments, regulators and planners;
- provide training to increase local skills and expertise, encompassing design through to deployment and maintenance.

The NZPSSC sees harmonisation of standards and building local capability as key priorities which will reduce transaction and compliance costs, allowing trained designers and installers from the Pacific nations to share resources, and enable the rapid deployment of solar and storage technologies across the region.



<http://www.nzffa.org.nz>

Sharing our knowledge of growing trees and their vital contribution to sustainable, profitable land management

Welcome to the NZ Farm Forestry website – the home for those with small forestry blocks – farmers, foresters investors, growers, managers. NZFFA are a network of tree growers each practicing sustainable land management in rural New Zealand.

More at <http://www.nzffa.org.nz/>



<http://www.nzgeothermal.org.nz>

Our geothermal resources are fascinating

The New Zealand Geothermal Association, established in 1990, is an independent non-profit industry association, open to anyone with an interest in geothermal matters. We have a diverse range of corporate members and 325 individual members. NZGA advocates for and represents the geothermal industry, and the Geothermal Heat-pump Association (NZ) is a major sub-group of the Association. NZGA is affiliated to the International Geothermal Association and the Royal Society of New Zealand.

It positions geothermal energy/resource as a great opportunity to create prosperity in a sustainable manner. It provides leadership and connection for the New Zealand geothermal community. It acts as a facilitator to 'sustain today and lead tomorrow.' In this context, it is:

- Connecting members, public, government and industry and the international geothermal community
- Assisting in developing a wider community of geothermal users and interested parties
- Connecting and expanding the network of expertise
- Creating value for members
- Building on NZs geothermal capability and track record
- Facilitating NZ geothermal sector growth
- Being the "go to" organisation to access NZ geothermal expertise
- Developing the global presence identifying NZ as an international geothermal centre of excellence



<http://www.nzhha.co.nz>

The NZ Home Heating Association was formed in 1985, by a group of wood heating manufacturers and retailers who saw a need to improve the standards of product and workmanship within the industry.

Since then the Association has played an active role in the development of appliance and installation standards both nationally and internationally and has become the industry's mouthpiece. It also plays a major role in the development and promotion of clean air standards, and energy and resource conservation. It runs a certification for installer and retailer members to help ensure that the appropriate standards are maintained at all levels within the industry. The Association is affiliated with similar trade groups and organisations throughout the world.

The New Zealand Home Heating Association is a trade organisation, comprising most of NZ's leading woodfire manufacturers, retailers and installers, and is dedicated to providing professional services and advice to it's members and their customers.



<http://www.windenergy.org.nz>

About the New Zealand Wind Energy Association

- The NZWEA is an industry association that promotes the development of wind as a reliable, sustainable, clean and commercially viable energy source.
- We aim to fairly represent wind energy to the public, Government and energy sector.
- Our members are involved in the wind energy sector and include electricity generators, wind farm developers, lines companies, turbine manufacturers, consulting organisations and other providers of services to the wind sector.
- By being a member of NZWEA you are assisting the development of wind energy in New Zealand and helping to reduce our greenhouse gas emissions to meet climate change targets.



<http://pureadvantage.org>

Pure Advantage – Leading New Zealand’s Green Growth

Comprised of business leaders who believe the private sector has an important role to play in creating a greener, wealthier New Zealand, Pure Advantage is a not-for-profit that investigates and promotes opportunities for green growth.

New Zealand is widely perceived as a clean, green country, but the reality is there are gaps between our eco-friendly image, our economic aspirations, and our current modes of doing business.

Pure Advantage seeks to close these gaps through a multi-sector communications strategy that champions the many benefits of green growth and plots a course towards achieving these.

Once New Zealanders fully understand the fact that environmental sustainability can and does catalyse economic growth, we will be better positioned to pursue opportunities to create wealth and skilled jobs while simultaneously conserving our natural resources and improving our environmental performance.



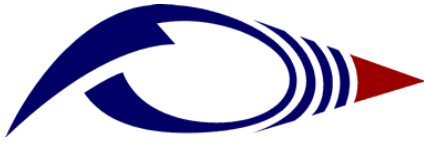
<http://sustainable.org.nz>

The Sustainable Business Network (SBN) is the largest and longest-standing organisation dedicated to sustainable business in New Zealand. It is a membership-based social enterprise, made up of over 520 businesses, governmental agencies and organisations located across New Zealand. SBN was established in 2002 by founder and CEO Rachel Brown with the vision to make New Zealand the model sustainable nation for the world.

We work with our members, helping them to succeed sustainably and to progress their role towards contributing to our vision. We encourage members to actively participate; to be bold, leading their sectors with innovative business models; and to reshape profit to include wider definitions than simply financial.

Our project work focuses on four transformation areas - Community, Restorative, Renewables, and Mega efficiency, with much of it related, either directly or indirectly, to the transition to a low carbon economy. This includes active projects to accelerate uptake of electric vehicles (EVs) and biofuels, and to encourage and support more urban cycling as a transport choice during and outside work life (the 'Bike 2050' project). Our EV project is a collaboration with over 30 of our member organisations, which represent all key stakeholder groups in the sector. The aim of the project is to contribute to the development of infrastructure which enables rapid growth in EVs over the next five years. At present we're developing a roadmap and a programme structure.

We also have projects related to the circular economy, sustainable food systems, and sustainable procurement. And, finally, Million Metres Stream is our innovative crowdfunding project to protect the health of our waterways and sequester carbon.



Sustainable Energy Forum

<http://www.sef.org.nz/index.shtml>

The Sustainable Energy Forum (SEF) is a group of individuals and representatives of corporate organisations and institutions promoting information and supporting action that will help move New Zealand towards a sustainable energy future.

The object of SEF, which was founded in the 1980s, is to promote the transition towards a sustainable energy system in New Zealand. SEF defines a sustainable energy system as being "the sourcing, transformation, use and management of energy in a manner which improves social well-being, while conserving physical resources, maintaining the integrity of ecosystems, and avoiding the transfer of costs to future generations."

SEF promotes this transition in various ways, including preparing submissions and media statements, an electronic energy news and discussion group, its quarterly publication EnergyWatch (see www.EnergyWatch.org.nz) and organising seminars.

Individuals, small energy businesses, institutions, and corporations with an interest in and commitment to sustainable energy are welcome to join the Sustainable Energy Forum.

Please see www.sef.org.nz/membership.html for further details or contact convenor@sef.org.nz.



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

<http://www.waikato.ac.nz>

"[The Energy Research Group](#), University of Waikato, works with industry to improve energy efficiency through improved processes, technology integration and plant reliability. We are an outcome focused group of chemical and mechanical engineers that undertake high-level research and analysis on energy systems and industrial processes in order to achieve energy savings."

“Yes We Can!” Achieve the Greenhouse Gas Emission Reduction Targets

SYMPOSIUM

Hotel Intercontinental, Wellington
31st May 2016

In Paris the Government agreed to climate change targets. These will be met by the emissions trading scheme; domestic mitigation; and purchase of international emission reduction units. With appropriate policy assistance domestic mitigation could be cheaper than the Government purchasing international units.

Businesses and local government are also looking to what immediate opportunities they can adopt to make them low carbon.

This symposium is to present examples of the opportunities that are technically and economically achievable within the Paris timetable. This will subsequently result in preparation of a collaborative Plan of Action and recommendation to Government on what policy actions would improve the rate of mitigation. The event will also give guidance on possible productivity and investment opportunities for business decision makers.

The symposium will cover the opportunities for the supply of energy from geothermal, solar, wind and bioenergy resources; the increased productivity from wise energy management; the availability of technology options such as electric vehicles and biofuels; and the demand for sustainable energy for business, transport and domestic use. The opportunities to be discussed are not “maybes”, or wishful thinking, but realistic and achievable within the Paris timetable.

Attendees will be invited to contribute to development of recommendations to Government on what policy changes would assist.

The symposium is for central and regional policy developers and investment strategists of business and industry to hear of priority opportunities

The theme of the symposium is “Yes we can!”



The stakeholder low carbon organisations behind this initiative are:



The symposium is supported by central and regional government entities who have enabling plans and activities for deriving social, economic and environmental outcomes from the climate change targets.



Background:

Each of the organisations presenting at this symposium is developing strategies and plans for addressing climate change offers. This is an opportunity for sharing these with attendees.

Government has a Business Growth Agenda and some policies that support achievement of emissions reduction/climate change targets. Most significantly though is that Government has announced its greenhouse gas emission reduction targets. Government has also signaled that it is developing targets for heat, transport fuel and energy intensity.

Researchers also have a range of research programmes that contribute to addressing the barriers

This symposium is aimed at bringing these initiatives together and developing a Plan of Action which can be agreed by business and central and territorial Government. It will also provide guidance to business on the viability of low carbon investment opportunities.

Focus:

If you wish to get an overview of the business opportunities arising from greenhouse gas emission reduction opportunities you should attend this symposium. It is also an opportunity to meet the sector leaders who are stakeholders in this event.

While the focus is on climate change targets it is recognized that the benefits also flow to the creation of employment, regional and Maori economic growth and achievement of wider environmental benefits.

The opportunities arise from wise use of New Zealand's renewable natural resources and cover the heat, electricity and transport components of energy, and the co-products of energy based activities such as the biochemicals that are obtained with the production of transport biofuels.

The Symposium provides an opportunity to hear from major players in the low carbon energy sector and identify common policies and programmes that would assist early achievement of the climate change/emissions reduction targets.

Development of the Plan of Action:

Because not all sectors will be able to present their views, summary documents from each sector organisation are being posted on <http://yeswecan.nz/>

This is a hands-on event where attendees are expected to contribute their own views and ideas. The symposium will assist discussion between attendees and provide an ability to question speakers.

Administration

The symposium is overseen by a steering group with representative of the Bioenergy Association, Energy Management Association, Wind Energy Association and the NZ Geothermal Association. Any questions should be addressed to anne.phiri@eastharbour.co.nz or call +64 4 (0)274 771 048.

The symposium is supported by the following business moving to become low carbon

Gold



Silver




Bronze



Symposium Programme 31 May 2016

| | |
|-------------------------|---|
| 8.00 | Registration |
| 8.30 - 8.40 | Welcome and opening Celia Wade-Brown, Mayor of Wellington |
| Keynote speakers | |
| 8.40 - 8.55 | What Government is looking for in a Plan of Action Hon Simon Bridges, Minister of Energy and Resources and Associate Minister for Climate Change Issues |
| 8.55 - 9.20 | How sustainability is helping our region grow Steve Canny, Venture Southland |
| 9.20 - 9.50 | The business benefits of GHG reduction and opportunities for NZ (slides) View video Robert Tromop, International Energy Consultant |
| 9.50 - 10.20 | Tea Break (Sponsored by Oji Fibre Solutions)  |
| Sector overviews | |
| 10.20 - 10.40 | Opportunities for New Zealand businesses out of Paris (slides) / View video John Carnegie, Business NZ |
| 10.40 - 11.00 | Introducing a draft Plan of Action (slides) View video Grant Smith, Bioenergy Association on behalf of stakeholders |
| 11.00 - 11.20 | Identifying the priority areas for action (slides) View video Martin Atkins and Tim Walmsley, Waikato University |
| 11.20 - 12.00 | What is needed to increase the uptake of opportunities? Facilitator: Ewan Gebbie, (Energy Management Association of New Zealand), Panel: Moana Mackey (Wellington City Council), View video Viv Heslop (Panuku Development Auckland) View video Peter Wells (InterIslander) (slides) View video Lyndon Haugh (Oji Fibre Solutions) (slides) View video Bridget Robson (New Zealand Geothermal Association) (slides) View video |
| 12.00 - 1.00 | Lunch (Sponsored by Pioneer Energy)  |

| Collectively what can be achieved | | |
|-----------------------------------|---|---|
| 1.15 - 2.15 | <p>What sectors can achieve Facilitated panel discussion by sector commentators to address opportunities to;</p> <ul style="list-style-type: none"> • Outline GHG mitigation opportunities • Suggest what would make a difference to the level of mitigation | |
| | <p>Heat Facilitator: Richard Briggs (EECA)</p> | |
| | <p>Direct geothermal - Brian White, NZ Geothermal Assoc Solar heating - Guy Marriage, Victoria Architecture school Wood energy - Rob Mallinson, Wood Energy Interest Group Industrial heat - Jonathan Pooch, EMANZ Solid and liquid waste to energy - Jurgen Thiele, Biogas Interest Group</p> | |
| | <p>Transport Facilitator: Chris Mulcare (Nu Capital Works)</p> | |
| | <p>Electric vehicles (slides) View video - Sigurd Magnusson, Better New Zealand Trust Liquid Biofuel and co-products (video) - Paul Bennett, Scion Heavy electric transport View video - Andrew Rushworth, Zero Emission Vehicles Urban transport management View video - Andy Foster, Wellington City Council Biogas as a vehicle fuel View video - Harvey Reid, DieselGas International</p> | |
| | <p>Electricity Introduction Facilitator: Bill Heaps (Strata Energy Consulting)</p> | |
| | <p>Solar electric - Barbara Ellison, Solar Council Wind - Blair Walter, NZWEA Geothermal export - Eric Wolters, Geothermal NZ Energy management, commercial building and street lighting - Frans Plugge, EMANZ Demand management - Stephen Drew, Enernoc</p> | |
| 2.15 - 3.00 | <p>What would assist sectors to achieve more Discussion groups facilitated by sector commentators</p> | |
| | Heat | Transport |
| 3.00 - 3.20 | Tea Break (Sponsored by Greenfuels NZ) |  |
| Pulling it together | | |
| 3.20 – 3.35 | <p>What will make mitigation initiatives successful (slides) View video Mike Underhill, Chief Executive, EECA</p> | |
| 3.35 - 4.15 | <p>Consideration of recommendations from other groups and draft Plan of Action Stream discussion of collated recommendations on what would make a difference and draft Plan of Action</p> | |
| | Heat – group notes | Transport – group notes |
| | Electricity – group notes | |
| 4.15 - 4.45 | Report back from groups – View video | |
| 4.45 - 5.00 | <p>Symposium close, summing up and where to from here. Brian Cox, Bioenergy Association/Symposium Steering Group</p> | |

List of attendees

| Organisation | Name |
|---|---------------------|
| ADI Systems | Steve Brewster |
| Air New Zealand | Guy Penny |
| Aotearoa Wave and Tidal Energy Association | Gareth Gretton |
| Appropriate Technology for Living Association / SEF | Cr Paul Bruce |
| Aqualinc Research | Helen Rutter |
| Ask Learn Share Ltd | Chaco van der Sijp |
| Aurecon Group | Blair Walter |
| Better New Zealand Trust | Sigurd Magnusson |
| Bioenergy Association | Brian Cox |
| Bioenergy Association / Negawatt Resources | Grant Dunford |
| Bioenergy Association | Anne Phiri |
| Bioenergy Association / Pioneer Energy | Grant Smith |
| British High Commission | Dr Steve Thompson |
| Buller District Council | John Hill |
| Business NZ | John Carnegie |
| Calibre Consulting | Jurgen Thiele |
| Callaghan Innovation | Nicole Miller |
| Callaghan Innovation | Chris Thomson |
| Chris Livesey Consulting | Chris Livesey |
| Contact Energy | Bernd Pummer |
| DairyNZ | Theresa Wilson |
| DETA Consulting | Jonathan Pooch |
| DieselGas International | Harvey Reid |
| East Harbour Energy | John Rutherford |
| EECA | Richard Briggs |
| EECA | Elise Broadbent |
| EECA | Dinesh Chand |
| EECA | Pramesh Maharaj |
| EECA | Vincent Smart |
| EECA | Mike Underhill |
| EECA | Amber Uren |
| EECA | Amelie Goldberg |
| Efficient Energy International | Robert Tromop |
| Energy Management Association (EMANZ) | Ewan Gebbie |
| Enercon - Energy and Utility Consultants | Ben Thomson |
| Enernoc | Stephen Drew |
| Entec Services | Bob Weston |
| Environmental Management Services | Noel Kortright |
| Fonterra Co-operative Group | Linda Thompson |
| Fulton Hogan | Michael LeRoy-Dyson |
| Geothermal NZ | Eric Wolters |
| GNS Science | Samantha Alcaraz |
| GNS Science | Brian Carey |

List of attendees

| | |
|---|--------------------|
| GNS Science | Melissa Climo |
| Greater Wellington Regional Council | Richie Singleton |
| Gull New Zealand | Dave Bodger |
| Heavy Engineering and Research Association (HERA) | Dr Wolfgang Scholz |
| Heron Investments | Rik Deaton |
| INFOSMART | Dr Hugh Barr |
| Interislander | Peter Wells |
| Kapiti Coast District Council | Jake Roos |
| Living Energy & Wood Energy Australia | Rob Mallinson |
| Materials Processing | Peter Fredricsen |
| Mayor of Wellington | Celia Wade-Brown |
| Media - Energy Watch | Steve Goldthorpe |
| Min of Energy & Resources & Associate Min for Climate Change Issues | Hon Simon Bridges |
| Ministry for Primary Industries | Myles Guy |
| Ministry for the Environment | Rita Lowe |
| Ministry for the Environment | Craig Salmon |
| Ministry of Business, Innovation & Employment | Clem Arlidge |
| Ministry of Business, Innovation & Employment | Jamie Kerr |
| Ministry of Business, Innovation & Employment | Marcos Pelenur |
| Ministry of Business, Innovation & Employment | Alexandra Seton |
| Miscanthus New Zealand | Peter Brown |
| Motu Economic and Public Policy Research | Catherine Leining |
| National Energy Research Institute (NERI) | Simon Arnold |
| Natures Flame | Gerard Dobbs |
| Ngati Tuwharetoa Geothermal Assets | Spence McClintock |
| Nu Capital Works | Chris Mulcare |
| NZ and Pacific Solar and Storage Council | Barbara Ellison |
| NZ Bus | Ian Gordon |
| NZ Geothermal Association | Bridget Robson |
| NZ Geothermal Association | Brian White |
| NZ Wind Energy Association | Grenville Gaskell |
| Oji Fibre Solutions | Lyndon Haugh |
| Palmerston North City Council | Adam Jarvis |
| Panuku Development Auckland | Viv Heslop |
| Parliamentary Commissioner for the Environment | Karen Lavin |
| Parliamentary Commissioner for the Environment | Bella Whittle |
| Perennial Energy | Adam Peren |
| PGG Wrightson Consulting | Tony Rhodes |
| Pioneer Energy | Michael Henry |
| Pioneer Energy | Richard Ireland |
| Pioneer Energy | Mary-Ann Mitchell |
| Pioneer Energy | Frans Plugge |
| Pioneer Energy | Jonathan Suggate |

List of attendees

| | |
|---|------------------------|
| Pioneer Energy | Tim Jackson |
| Polytechnik Biomass | Christian Jirkowsky |
| Pure Advantage | Simon Millar |
| RCR Energy Systems | James Malthus |
| Royal Society of New Zealand | Marc Rands |
| Sapere Research Group | Toby Stevenson |
| Scion | Paul Bennett |
| Scion | Ian Suckling |
| Solray Systems / Solvent Rescue | Chris Bathurst |
| Strata Energy Consulting | Bill Heaps |
| Sustainable Energy Forum - Guest Editor EW77 | John Irving |
| Sustainable Business Network | Phil Jones |
| Sustainable Energy Forum | Molly Melhuish |
| Sustainable Energy Forum | Ian Shearer |
| The Flue Shop | Glen Davies |
| The Morgan Foundation | Paul Young |
| Unitec Institute of Technology | Jonathan Leaver |
| Unitec Institute of Technology | Gregor Steinhorn |
| University of Auckland and Geothermal Institute | Prof Rosalind Archer |
| University of Otago | Dr Janet Stephenson |
| University of Otago | Dr Hilary Phipps |
| University of Waikato | Martin Atkins |
| University of Waikato | Tim Walmsley |
| Venture Southland | Rachel Butler |
| Venture Southland | Steve Canny |
| Victoria University of Wellington | Guy Marriage |
| Waikato Institute of Technology | Jo Douglas |
| Wellington City Council | Rod Boys |
| Wellington City Council | Councillor Andy Foster |
| Wellington City Council | Moana Mackey |
| Wellington City Council | Adrian Mitchell |
| Wellington City Council | Emily Taylor-Hall |
| Z Energy | Emily Watt |
| Z Energy | Steve Alesech |
| Z Energy | David Jacobson |
| Zero Emission Vehicles | Andrew Rushworth |

Welcome and opening address

Celia Wade Brown,

**Mayor of Wellington
Wellington City Council**

Wellington City Council rises to the challenge of climate change and resilience



Wellington City Council is a leader on climate change and resilience. We are a member of the 100 Resilient Cities network funded by the Rockefeller foundation and this month adopted a Low Carbon Capital plan.

Wellington aims to be low carbon, liveable and resilient to stresses and potential shocks that the city will face as a result of climate change.

Global cities consume two-thirds of the world's energy and create over 70% of global greenhouse gas emissions. Over 90% of all urban areas are coastal, putting most cities on Earth at risk of flooding from rising sea levels and powerful storms.

Ultimately, every city and state is responsible for contributing to climate mitigation if we are to meet the goals set at the recent Paris global summit. Cities emerged out of COP21 in Paris as the key non-state stakeholders in meeting our global carbon challenge.

Wellington City Council's recently-audited greenhouse gas emissions inventory is remarkably different from that of the city. As an organisation, waste deposited at its two landfills accounts for more than 80% of the organization's overall emissions. This poses a challenge for the council which has set itself a target of reducing emissions by 80% by 2050.

Mayor Celia Wade-Brown has been invited to speak on climate change and city resilience at two international conferences in Dubai and Melbourne in recent months and she will be talking about how Wellington City Council will achieve its emission reduction target and prepare the city to cope with climate change.

Celia Wade-Brown is in her second term as Mayor of Wellington, New Zealand's capital city.

Her career has included IT programming, consultancy and teaching; working in Europe, Africa and Australasia. On Council she has championed smart energy initiatives, active and public transport, community events, arts and economic growth in education, high-tech and creative sectors. Celia enjoys the free exchange of views which comes with the Capital's high degree of civic involvement.

Celia was born in West London and grew up in a council flat overlooking the Paddington railway line. After a gap year working as a laboratory assistant in a girls' school in Ghana and travelling in Africa, she studied Chemistry, English and Philosophy at Nottingham University. She began her IT career at IBM UK as a trainee systems engineer, then programmed in APL at a small consultancy in London.

She emigrated to New Zealand and in 1983 bought the house in Island Bay in which she still lives with her husband Alastair. She enjoys kayaking, walking and going to the theatre.

Email: mayor@wcc.govt.nz

Website: www.wellington.govt.nz

Key note speakers

Hon Simon Bridges MP

Minister of Energy and Resources & Associate Minister for Climate Change Issues



“It’s an exciting and challenging time to be in the energy sector – both in New Zealand and globally. Technological transformation, changing consumer preferences, a growing international focus on the critical role energy plays in business competitiveness, volatile commodity prices and the need to transition to lower emissions economies all form part of the changing energy picture. In this context, we want to set a clearer direction for the future of the energy sector.

This is why I’m considering new energy targets. Energy targets will help send a strong signal of the Government’s vision for the energy sector, provide a means of

measuring our international competitiveness, and provide a platform for engagement between business and government.”

Email: simon.bridges@parliament.govt.nz

Stephen Canny

GM Business and Strategic Projects Venture Southland



Stephen has an extensive background in business and business improvement and project management and has managed the successful completion of a range of large projects in Southland such as Southland’s Whole of Community Broadband Network, as well as the successful completion of major civil and mechanical engineering projects including satellite and space ground stations and terrestrial television. He also took a lead in the establishment of the SIT Velodrome. He has wide ranging knowledge of the energy sector including the development of successive Southland Regional Energy Strategies, Wood Energy South Project, Dairy Energy Efficiency initiatives, Waste to Energy Projects, Remote Area Power supply initiatives, Electric

Vehicle deployment, transmission network power pricing and he is also a Shareholder Trustee on the Southland Electricity Supply Consumer Trust.

Stephen is a member of the Institute of Directors of New Zealand and has broad experience as a Trustee and Board member, including Chairman of the National Broadband Forum, Chairman of Junior Worlds 2012 Ltd and President of Cycling New Zealand. He has represented New Zealand at the Asia-Pacific Economic Cooperation (APEC) events, and has presented at numerous international conferences.

Email: steve@venturesouthland.co.nz

Website: www.venturesouthland.co.nz

Robert Tromop

Managing Director Efficiency Energy International Ltd



Director of Efficient Energy International Limited, a consultancy specialising in integrated policy and market strategy for sustainable energy, Robert consults on diverse aspects of sustainable energy. Recent projects include: Best Policy Practices for Energy Efficiency for UNECE; Policies and building code options for gas end-use efficiency in Uzbekistan, and guidelines for industrial energy efficiency for the World Bank, Energy productivity in the GCC region with KAPSARC & UNESCWA; and Development of competency framework and training for EMANZ EnergyManager Professional.

Until 2014, Robert was Head of Energy Efficiency at the IEA. Key outputs included; the Energy Efficiency Market Report, Multiple Benefits of Energy Efficiency, Regional Energy Efficiency Policy Recommendations, cross-sector and sectoral policy analysis in a series of Policy Pathways and sector focused projects in buildings, appliances, industry and transport.

Prior to this Robert was Manager Monitoring and Research for the New Zealand Energy Efficiency & Conservation Authority (EECA). This involved leading monitoring and analysis of programme design and performance and, tracking changes energy efficiency and renewable energy across the New Zealand economy, development and operation of economic analysis tools for policy design and evaluation. Robert's international energy efficiency experience includes IEA and APEC energy efficiency committees and programmes, capacity building, and development of the APEC PREE review process with the APEC Energy Working Group Secretariat.

Until 2005, he led New Zealand's product efficiency regulatory programme, and held roles in the development of New Zealand's first National Energy Efficiency and Conservation Strategy. Robert has a Masters Degree in Mechanical Engineering.

Email: robert@eeil.co.nz

Website: <http://www.eeil.co.nz/>

Speakers

John Carnegie

Manager Energy, Environment & Infrastructure Business NZ



John is a senior manager at BusinessNZ, New Zealand's peak business advocacy body. He is an experienced regulatory economist with over two decade's experience in public policy and energy markets. John has previously held roles at The New Zealand Treasury, the Ministry for Economic Development, the electricity market operator (the Marketplace Company), and Genesis Energy. John specialises in energy and climate change policy and its implications for business. He was a member of the Treasury-led Emissions Trading Stationary Energy and Industrial Process Technical Advisory Group, the Ministry for the Environment Electricity Allocation Factor contact group, and a member of the New Zealand official delegation to the last six international climate change negotiations. He is also currently a member of the Electricity Authority's Wholesale Advisory Group and a member of the New Zealand Smart Grid Forum.

Email: jcarnegie@businessnz.org.nz

Website: www.businessnz.org.nz/

Grant Smith

GM Business Development and Strategy Pioneer Energy



As GM Business Development & Strategy for Pioneer Energy Ltd, Grant is involved in all facets of the business and has a proven executive management track record with over 15 years of experience driving growth in the electricity industry. Grant was CEO of Energy for Industry (EFI) a market leader in providing energy solutions and partnering to some of New Zealand's leading exporters, and institutions. On the sale of the business to Pioneer Generation (now Pioneer Energy) in 2012, Grant's highly valued expertise and knowledge was recognised and retained as is reflected in his role in the executive team.

Prior to heading EFI, Grant was Meridian Energy's Portfolio Manager of Trading & Generation, responsible for the overall risk trading risk position and he led the integration of Meridian Energy's wholesale and retail market positions.

Grant has previously worked in the Australian and New Zealand energy markets in roles including power station development, strategy and business development, technology research, commercial and trading risk management and retail sales and marketing.

Grant is active in the governance and memberships of a number of clean energy Associations in New Zealand and is the current Chair of Bioenergy Association NZ.

Email: grant.smith@pioneerenergy.co.nz

Website: www.pioneerenergy.co.nz

Martin Atkins | Tim Walmsley

Waikato Energy Research Centre
University of Waikato



Dr Martin Atkins and **Dr Timothy Walmsley** are Chemical Engineers and Research Fellows in the Waikato Energy Research Centre at the University of Waikato.

Over the past several years Dr Atkins and Dr Walmsley in collaboration with the other members of the Waikato Energy Research Centre, have actively applied new graphical carbon emissions and energy investment pinch analysis techniques to New Zealand's electricity, transport, and process heat sectors



as a way of quantifying the impacts of various emissions reduction measures while developing a longer term emissions reduction strategy for each sector.

Martin's research focuses on increasing industrial symbiosis in wood processing clusters by optimising linkages between existing processes and effectively integrate new wood based processes.

Tim's research centers on realising a step change energy reduction for NZ dairy factories through the radical redesign of the milk powder plant.

Email: matkins@waikato.ac.nz **Email:** timgw@waikato.ac.nz **Websites :** www.energyefficiencynz.com

Mike Underhill

Chief Executive
Energy Efficiency & Conservation Authority (EECA)



Mike has extensive management experience in the gas and electricity sector in New Zealand and overseas. He has been Chief Executive of WEL Networks, TransAlta, and Energy Direct.

He has also had significant governance experience in this sector, and has been chairman of Pacific Energy Ltd, EECA, and Katolyst, the Waikato Regional Development agency.

He has a Bachelor's degree in engineering, a Master's degree in economics, has completed the Advanced Management Program at Harvard, and is a Fellow of the Institution of Professional Engineers. Mike Underhill joined the EECA team as Chief Executive in May 2007.

Website: www.eeca.govt.nz

Brian Cox

Executive Officer
Bioenergy Association (BANZ)



Brian has been a long-standing champion of using NZ's natural resources for the creation of sustainable communities and has assisted the Bioenergy Association for the last decade.

Brian is often called upon as a commentator to provide insight into matters of biogas, wood energy and liquid biofuels.

Brian assists Bioenergy Association members to build their businesses and grow the sector.

The organisation maintains a clear, strong voice in advocating the benefits of bioenergy and a reminder that New Zealand already relies on bioenergy for 14% of its energy needs. The Association estimates that bioenergy could supply up to 25% of New Zealand's energy needs by 2040, including 30% of transport fuel, and that it has the potential to generate around \$6 billion in annual revenue for the country's economy.

Brian has helped build confidence within industry in order to encourage conversion from coal to wood fuel. His focus has been on developing consistent supply chains of wood fuel and working with organisations to increase understanding of how bioenergy can be good for business as well as the environment.

Email: brian.cox@bioenergy.org.nz

Website: www.bioenergy.org.nz

Facilitators and Panelists

Ewan Gebbie

**Executive Officer
Energy Management Association of New Zealand (EMANZ)**

Ewan has been involved in the New Zealand energy sector in a range of policy and regulatory roles both in Government and industry since the late 1990's.

He has been Executive Officer of the Energy Management Association since 2009 and currently sits on the Electricity Authority's Retail Advisory Group, and Tariff Technical advisory Group. Ewan is also a Board member of the NZ Pacific Solar and Energy Storage Council.

Email: ewan.gebbie@emanz.org.nz

Website: www.emanz.org.nz

Moana Mackey

**Programme Manager for Sustainability
Wellington City Council**

Moana is the Programme Manager for Sustainability at WCC with a particular focus on climate change and smart energy strategy, policy, and project management. Moana was a Labour Member of Parliament from 2003-2014 and was Labour's spokesperson for the Environment, Climate Change, Energy, Science and R&D, and housing.

Moana has an Honours degree in Biochemistry and Molecular biology from Victoria University.

Email: Moana.Mackey@wcc.govt.nz

Website: www.wellington.govt.nz

Dr Viv Heslop

**Sustainability Manager
Panuku Development Auckland**

Viv is the Sustainability Manager for Panuku Development Auckland, Auckland Council's new urban regeneration agency. In this role she is responsible for advising the Board on sustainability, developing the organisation's corporate responsibility framework, driving the integration of sustainability into development projects and implementing supporting sustainability initiatives.

One of the areas of work that Viv leads for Panuku is the response to climate change, particularly how to design and deliver urban regeneration that both mitigates greenhouse gas emissions as well as being adaptive to the predicted impacts of climate change.

Email: viv.heslop@developmentauckland.co.nz

Website: www.panuku.co.nz

Peter Wells

**Strategy Manager - Interislander
KiwiRail / Interislander**

Peter is a Chartered Engineer through the Institute of Marine Engineering, Science and Technology as well as a qualified Naval Architect. With 20 years of experience in the technical management of various types of ships, including bulk carriers, tankers, container ships and ferries. He has been working for KiwiRail / Interislander since 2007.

In his current role as Strategy Manager he is responsible for future fleet and port changes needed to grow the Interislander business and support KiwiRail's domestic growth strategy. Fuel selection and use is an important component of this role as KiwiRail seeks to reduce its Energy usage and costs.

Email: pwells@interislander.co.nz

Website: www.interislander.co.nz/ www.kiwirail.co.nz/

Lyndon Haugh

**Energy Manager
Oji Fibre Solutions (NZ)**

Lyndon has worked in the New Zealand pulp & paper industry for many years in maintenance, project engineering, and production management roles.

This has included experience in engineering and production aspects of generation of heat and electricity from fossil and renewable fuel sources as well as the use of significant amounts of electricity and heat in production process.

His present role is as Energy Manager for Oji Fibre Solutions (NZ) Ltd (formerly Carter Holt Harvey Pulp & Paper Ltd). Oji Fibre Solutions is the largest user of wood for process heat in NZ.

Email: Lyndon.Haugh@ojifs.com

Website: www.ojifs.com/

Bridget Robson

New Zealand Geothermal Association (NZGA)

32 years' experience in natural resource management. Tertiary training in applied science (BAGSc) and planning (MPhil).

Work so far:

Regional government: operational soil conservation, waste management policy and implementation, energy strategy, forestry education, liaison and policy, regional RMA policy, geothermal policy and implementation. Developed and ran Bay of Plenty Region's RMA geothermal programme for 6 years. This supports reservoir allocation for the Kawerau, Rotorua and Tauranga geothermal systems and supports use and non-extractive use of the 11 geothermal systems in the Bay of Plenty. It involves education, policy, science, resource use permits and compliance.

Industry - forestry and geothermal - environmental management systems, policy advocacy, RMA compliance including when commissioning the MRP Kawerau geothermal power station.

Email: bridget@eland.co.nz

Richard Briggs

**Business Partnerships and Channel Manager
Energy Efficiency & Conservation Authority (EECA)**

Richard is responsible for the management and motivation of all EECA service delivery partners and leads EECA's partnerships with the industry sector.

EECA Business contributes to the Government's priority of building a more productive and competitive economy by promoting improved energy efficiency and the increased use of renewable energy. EECA targets carbon reduction opportunities to help New Zealand's transition to a low emissions economy.

Prior to joining EECA, Richard held roles at Director, CEO and General Manager levels in the telecommunications industry.

Richard has extensive channel experience gained over 30 years of building partnerships and managing third party relationships in New Zealand, Australia and the Pacific Islands.

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Website: www.eecabusiness.govt.nz

Brian White

**Executive Officer
New Zealand Geothermal Association**

Brian has had over 30 years in the geothermal industry starting with operations at Wairakei, progressing through design, field investigations, and due diligence. He has been involved with electricity generation and

heat projects. He was the first Executive Officer of the New Zealand Geothermal Association and has continued in this role. One secondment included a long period monitoring our energy markets and supporting government on energy technical matters, including carbon tax and emissions issues. As such he brings a technical, commercial and regulatory background to a wide range of policy issues.

Email: brian.white@eastharbour.co.nz

Website: www.nzgeothermal.org.nz

Guy Marriage

**Senior Lecturer
Victoria University**

Guy is an architect and an educator, who has specialist knowledge and practical experience in working with energy-efficient buildings. He was one of the architects on the Meridian building in Wellington which was the first Green-star rated building in NZ, and was the architect for the VUW project First Light House, a student-led initiative that competed at the Solar Decathlon 2011 in Washington DC. He continues to work with First Light Studio to create more houses that are energy efficient, comfortable, well-designed homes.

Email: guy.marriage@vuw.ac.nz

Website: www.firstlightstudio.co.nz

Rob Mallinson

**Managing Director
Living Energy and Wood Energy Australia**

In 2000 whilst a General Manager in Carter Holt Harvey's Forest division, Rob set up a stand-alone business for CHH (CHH Biogrid) to promote the use of biomass as an energy source to larger commercial and industrial heat users. Rob established Living Energy in 2003 and Wood Energy Australia in 2013, which, between them, have since installed over 40,000kW of wood-fired boilers at a range of different sites – from sawmills to swimming pools, schools, universities, hotels, and hospitals.

Rob has been on the Board of the Bioenergy Association of New Zealand (BANZ) since its inception in 2001, holding the role of Chair from 2008 to August 2015. Prior to getting hooked on wood energy, Rob worked in the oil industry in Europe and North America, but has now crossed from the dark side

Email: rob.m@livingenergy.co.nz

Website: www.livingenergy.co.nz

Jonathan Pooch

**Managing Director
DETA Consulting Ltd**

Jonathan is founder and Managing Director of DETA Consulting, one of the leading energy consulting firms in New Zealand.

He has spent over 10 years delivering energy efficiency improvements for large industrial businesses. His ability to translate complex technical energy and risk information to a range of audiences has ensured successful project delivery in a variety of business sectors and provided proven energy savings.

As an example, Jonathan and the team at DETA Consulting have recently facilitated an Energy Management Programme at ANZCO Foods realising annual savings of 35 GWh.

Email: jonathan.pooch@deta.co.nz

Website: www.deta.co.nz

Jürgen Thiele

**Senior Principal
Calibre Consulting**

Jürgen has 38 years experience in anaerobic digestion biochemistry, biotechnology, process design and implementation (wastewater treatment plants and Waste to Energy digesters).

Jürgen's specialties are commercial developments and innovations in the biogas field, value recovery from organic residues, digester efficiency upgrades and digester process commissioning.

Recent successes were the use of recuperative thickening for digester capacity upgrade for trade waste co-digestion in Palmerston North and Hamilton, NZ and retrofit of the municipal sludge digesters for high rate

digestion of industrial trade waste with high levels of fat, oil and grease. The innovation received the InnovateNZ silver award of excellence in 2015.

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Website: www.calibreconsulting.co

Chris Mulcare

**Director
Nu-Capital Works**

Chris Mulcare is Director of Nu Capital Works, a boutique enterprise and investment agency specialising in regional economic development. Chris spent 6 years from 2007 to 2013 at Investment NZ part of NZTE leading their clean technology and renewable energy areas. As part of this work, Chris developed a Clean Economy Framework - a model for a high value low carbon economy based on our measured values of quality of life, quality of the environment, social equity, and education. After leaving NZTE, Chris spent a year as Partnerships Manager for the Norske Skog Z Energy "Stump to Pump" biorefinery project.

Email: xtopher.mulcare@gmail.com

Sigurd Magnusson

**Electric Vehicle Advisor
Better NZ Trust**

Sigurd is a huge supporter of electric vehicles and sustainability. He owns a fully electric car and compiles a comprehensive guide to New Zealand Electric Cars, regularly updated at www.electriceaven.nz. He tirelessly promotes clean transport through the Better NZ Trust, and provides advice to a number of organisations to boost electric car adoption, including Greater Wellington Regional Council.

Sigurd has 20 years experience in the software sector, and is a co-founder and director of a leading New Zealand software company, SilverStripe.

Sigurd spends his leisure time mountain biking, camping, and doing astronomy, and lives with a young family in Wellington.

Email: sigurdmagnusson@gmail.com

Paul Bennett

**Science Leader for Clean Technologies
Scion**

Dr Paul Bennett is the Science Leader for Clean Technologies. Paul has spent over 25 years working on a range of fuels, biofuels and bioenergy issues. He has worked as an independent consultant, for quasi-government organisations and large corporates developing new technologies and business opportunities in biofuels. Paul and his team at Scion are investigating new economic opportunities in such things as industrial biorefining, bioenergies and bio-based substitutes for petroleum and other declining resources.

Email: paul.bennett@scionresearch.com

Website: www.scionresearch.com

Andrew Rushworth

**Managing Director
Zero Emission Vehicles**

Andrew is the Managing Director of Zero Emission Vehicles Limited, a New Zealand company formed in 2008 to develop solutions in the heavy battery electric vehicle market.

ZEV is one of a select few companies worldwide with experience providing electric trucks to the commercial market.

Since 2008, Andrew has engaged with relevant industry sectors in China, Europe the USA and Australia developing a deep expertise of the technology and application of battery electric technology to heavy commercial vehicles worldwide.

Prior to this, Andrew spent over two decades in technology development and sales to the global oil industry delivering high tech solutions to a range of multinational companies in more than 30 countries worldwide.

Email: Andrew.rushworth@zevnz.com

Website: www.zevnz.com

Councillor Andy Foster

**Chairman – Transport and Urban Development
Wellington City**

Andy is a long standing councillor with extensive experience in leading Wellington’s transport, urban planning, environmental management and resilience. Wellington City has by far the highest proportion of people walking, cycling and using public transport in the country and that proportion is growing strongly, built on a deliberate strategy of developing a compact walkable city based around a strong central city. Wellington is also acknowledged as a leader in environmental restoration and resilience. Andy is a Guardian and foundation Trustee of Zealandia, and President of the New Zealand Traffic Institute – TRAFINZ.

Email: Moana.mackey@wcc.govt.nz

Website: www.wellington.govt.nz

Harvey Marshall Reid

**Managing Director
DieselGas International**

Harvey has a diverse background in company management, marketing, automotive diesel engineering and product development. He is the holder of many patents and has led the development team that has developed the DieselGas diesel/CNG (compressed natural gas) dual-fuel system over 30 years.

Harvey is responsible for investor relations, sales and marketing plus in the current project is responsible for managing relationships with the more than a dozen technical and commercial parties in the US who are involved in the integration, testing and emission certification of the CNG/diesel dual-fuel engines being applied to Class 8 truck engines (350-450kW) for use in US trucks.

Cost savings and 20%+ CO2 reductions are the main drivers. The use of RNG (renewable natural gas) is gaining momentum in the US.

Email: harvey.reid@dieselgas.co.nz

Website: www.dieselgas.co.nz

Bill Heaps

**Managing Director
Strata Energy Consulting**

Bill Heaps is the Managing Director of Strata Energy Consulting, is an electrical engineer, business executive and company director with broad experience in major infrastructure and energy supply businesses. Bill has considerable knowledge of electricity utilisation, energy efficiency, demand-side management and technology transfer. He is currently advising clients in New Zealand, Australia, Malaysia and Singapore on energy related issues and has presented papers at major international conferences.

In New Zealand, Bill has held executive management positions in energy infrastructure businesses (including renewable energy) and chaired several advisory groups that have been influential in building New Zealand’s renewables based electricity market.

Email: bill.heaps@strataenergy.co.nz

Barbara Ellison

NZ and Pacific Solar and Storage Council

Barbara Elliston is also a director of Elliston Power Consultants, Counties Power, the Australian Solar Council, solar PV start-up company Easy Warm, and a member of the NZ Electricity Authority’s Security and Reliability Council. A qualified electrical engineer and 30 veteran of the power industry, Barbara’s background includes corporate governance, strategic development, transmission network development, and start-up product development in renewable energy, solar thermal and solar photovoltaics. Previous roles in the power sector include directorships with Genesis Energy, Transpower, and Comalco Power. Barbara’s focus for the NZPSSC is to work towards the seamless integration of solar and storage technologies with grid networks.

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Website: www.nzpssc.org.nz

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| Blair Walter | Renewable Energy Leader Aurecon |
| <p>Blair Walter is a mechanical engineer with 20 years' experience in the international energy sector including 13 years dedicated to renewable energy. He has undertaken projects in Brazil, Turkey, Mexico, Europe, Indonesia, Thailand, Australia, New Zealand, South Africa, Kenya and Uganda. Blair has led due diligence exercises on over 15 GW of renewable energy projects, including wind, solar and hydro assets, and has provided technical and commercial evaluation services to project developers and financiers on a wide range of projects at all stages from conception and initiation through to mature operations.</p> <p>Email: Blair.Walter@aurecongroup.com Website: www.aurecongroup.com</p> | |
| Eric Wolters | Business Director, Power Beca Ltd |
| <p>Eric Wolters is a principal level engineer and manager tasked with helping Beca further develop its renewable power generation business and technical capability. He is active in pursuing renewable generation project opportunities in New Zealand and SE Asia, especially geothermal power.</p> <p>His past experience includes consulting assignments as lender's technical advisor on a number of hydro power plants in SE Asia and Israel; and project engineer on geothermal power projects in New Zealand, Indonesia and Philippines.</p> <p>While with Parsons Brinckerhoff, he managed teams of engineers designing and advising clients in wind, hydro and solar PV power generation projects and technologies.</p> <p>Email: eric.wolters@beca.com Website: https://nz.linkedin.com/in/eric-wolters-bb72714</p> | |
| Frans Plugge | Manager Energy Solutions, Business Development & Strategy Pioneer Energy |
| <p>Frans completed a B.Ag.Com at Lincoln University before becoming a registered valuer. In 1995 he established ECOsystems, a company specialising in energy efficiency and integrated energy efficiency projects. After 20 years of operation, ECOsystems had established offices in Christchurch, Wellington and Auckland. ECOsystems was purchased by Pioneer Energy Limited in 2015. Frans is a long standing elected board member of the Energy Management Association of New Zealand.</p> <p>Email: frans.plugge@pioneerenergy.co.nz Website: www.pioneerenergy.co.nz</p> | |
| Stephen Drew | Country Manager EnerNOC |
| <p>Stephen Drew is Manager of EnerNOC in New Zealand. Stephen trained as a chemical engineer in the UK and has over 35 years' experience in the energy sector in New Zealand.</p> <p>Stephen has long promoted the use of industrial electro-technologies, energy efficiency and the use of demand-side resources as part of the whole system challenge required by a more renewable grid to reduce emissions. He understands the value of using both process and thermal energy storage.</p> <p>He has helped New Zealand gain an international reputation for the aggregation of a portfolio of interruptible loads to provide material benefits in the Instantaneous Reserves market.</p> <p>Stephen is a member of the Wholesale Advisory Group, the Reserves and Frequency Management engagement group and the Smart Grid Forum.</p> <p>Stephen is also an enthusiastic driver of an Electric Vehicle in Wellington.</p> <p>Email: sdrew@enernoc.com Website: www.enernoc.com</p> | |

| Attendees | | |
|---|--|--|
| Steve Brewster ADI Systems | Email: Mobile: | Steve.d.brewster@adi.ca +64 (022) 043 2017 |
| <p>What are your activities / interests? Waste-to-energy projects (Design – build for heating, cooling, electricity or transport fuel) using organic waste such as food industry waste, agricultural and farm waste, municipal organic waste and primary industry waste</p> <p>What are you interested in finding out at the symposium? Current state of play with all renewable energy activities in New Zealand.</p> | | |
| Guy Penny Air New Zealand | Email: Mobile: | Guy.Penny@airnz.co.nz +64 (021) 839 046 |
| <p>What are your activities / interests? Carbon offsetting, generally.</p> <p>What are you interested in finding out at the symposium? What’s happening to reduce or offset GHG emissions</p> | | |
| Gareth Gretton Aotearoa Wave and Tidal Energy Association | Email: Mobile: | gareth@awatea.org.nz +64 (021) 209 5163 |
| <p>What are your activities / interests? Chair of AWATEA – promoting and acting as a focus for wave and tidal energy in NZ.</p> <p>What are you interested in finding out at the symposium? I want to highlight – in a balanced way – the opportunities for marine energy. Given the state of international developments, this is achievable within the Paris timetable, even if starting from a very low base in NZ.</p> | | |
| Cr Paul Bruce Appropriate Technology for Living Association / Sustainable Energy Forum | Email: Phone: Mobile: | Brucepaul39@gmail.com +64 (04) 972 8699 +64 (021) 027 19370 |
| <p>What are your activities / interests? Zero emission public transport, light rail, trolley and battery buses.</p> <p>What are you interested in finding out at the symposium? How can we accelerate transition to zero emission public transport?</p> | | |
| Helen Rutter Aqualinc Research | Email: Phone: Mobile: | h.rutter@aqualinc.co.nz +64 (03) 964 6516 +64 (021) 873788 |
| Chaco van der Sijp Ask Learn Share Ltd, London | Email: Mobile: | c@h2.eu +64 (021) 0239 4000 |
| <p>What are your activities / interests? Disruptive innovation, and energy generation</p> <p>What are you interested in finding out at the symposium? Create space for disruptive innovation, and increase of supply and storage into hydrogen</p> | | |
| Grant Dunford BANZ Board Member & Negawatt Resources | Email: Phone: Mobile: | Grant.Dunford@nrl.co.nz +64 (04) 939 0313 +64 (021) 5666 76 |
| <p>What are your activities / interests? Identification and development of MSW & Biomass resources for employment and economic renewal within our regions.</p> <p>What are you interested in finding out at the symposium? A joint recommendation to Government that encapsulates environmental, economic and social outcomes as their highest purpose outcome and transcends personal and business bias.</p> | | |
| Dr Steve Thompson British High Commission, Wellington | Email: Phone: Mobile: | Steve.thompson@fco.gov.uk +64 (04) 924 2833 +64 (021) 512 055 |
| <p>What are your activities / interests? Renewable energy technologies</p> <p>What are you interested in finding out at the event? New technologies and potential links with UK groups.</p> | | |

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| John Hill Buller District Council | Email: johnh@bdc.govt.nz Phone: +64 (03) 788 9111 Mobile: +64 (027) 554 3999 |
| Chris Thomson Callaghan Innovation | Email: Chris.thomson@callaghaninnovation.govt.nz Mobile: +64 (027) 808 1478 |
| What are your activities / interests? Energy Sector Manager | |
| What are you interested in finding out at the symposium? Commercial opportunities for bio energy technology. | |
| Nicole Miller Callaghan Innovation | Email: nicole.miller@callaghaninnovation.govt.nz Phone: +64 (04) 931 3082 Mobile: +64 (027) 808 2516 |
| What are your activities / interests? Supporting businesses using or developing technology to build strategic international partnerships. Innovation networks and international best practice | |
| What are you interested in finding out at the symposium? International trends and opportunities as well as domestic opportunities. | |
| Chris Livesey Chris Livesey Consulting | Email: livesey.chris@gmail.com Mobile: +64 (021) 243 6114 |
| What are your activities / interests? Creating a sustainable, prosperous NZ | |
| What are you interested in finding out at the symposium? Realistic timeframes for reducing each of NZ's streams of GHGs; social and private costs of reducing each of NZ's streams of GHGs in accordance with these timeframes; who needs to do what to ensure these reductions are made; impacts of these changes on jobs and the rates of loss/gain of jobs for the workers most affected. | |
| Bernd Pummer Contact Energy | Email: Bernd.Pummer@contactenergy.co.nz Phone: +64 (04) 462 1150 Mobile: +64 (021) 779 449 |
| What are your activities / interests? Renewable generation and transport options. | |
| What are you interested in finding out at the symposium? Recent developments, research, interest in the transport (bio)fuels area. | |
| Theresa Wilson DairyNZ | Email: Theresa.wilson@dairynz.co.nz Mobile: +64 (021) 241 1128 |
| What are your activities / interests? Sustainability for dairy farmers | |
| What are you interested in finding out at the symposium? Greenhouse gas emissions and reductions possible from energy savings. | |
| Ben Thomson Enercon – Energy and Utility Consultants | Email: ent@enercon.co.nz Phone: +64 (04) 913 4163 Mobile: +64 (027) 202 6576 |
| What are your activities / interests? Enercon is an energy management engineering consultancy with over 10 years' worth of experience and proven results in reducing client's energy consumption/costs whilst improving environmental performance. | |
| What are you interested in finding out at the symposium? Ways to improve uptake of energy efficiency and energy management in industry and commercial buildings, particularly from the viewpoint of the energy end-user including specific barriers and roadblocks foreseen by them. | |
| Amber Uren Energy Efficiency & Conservation Authority (EECA) | Email: Amber.uren@eeca.govt.nz Mobile: 64 (021) 209 6131 |
| What are your activities / interests? Bioenergy, process heat. | |
| What are you interested in finding out at the symposium? Government direction and opportunities. | |
| Amelie Goldberg | Email: Amelie.goldberg@eeca.govt.nz Phone: +64 (04) 470 2425 |

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| Energy Efficiency & Conservation Authority (EECA) | Mobile: +64 (022) 353 1705 |
| What are your activities / interests? National Energy Efficiency and Conservation Strategy refresh. | |
| What are you interested in finding out at the symposium? Energy efficiency and renewable energy potentials, barriers and opportunities in different sectors. | |
| Dinesh Chand Energy Efficiency & Conservation Authority (EECA) | Email: dinesh.chand@eeeca.govt.nz Phone: +64 (04) 470 2548 Mobile: +64 (027) 557 2468 |
| What are your activities / interests? Wood Energy technology. | |
| What are you interested in finding out at the symposium? How to encourage wood energy, what is required, where to next. | |
| Elise Broadbent Energy Efficiency & Conservation Authority (EECA) | Email: Elise.broadbent@eec.govt.nz Phone: +64 (04) 475 2975 Mobile: +64 (0274) 439 688 |
| What are your activities / interests? Policies and strategies that link energy and climate change. Communications approaches to energy and climate change issues. | |
| What are you interested in finding out at the symposium? What initiatives are currently happening across different sectors? Where are the greatest potentials? How can we best communicate these potentials and opportunities? | |
| Pramesh Maharaj Energy Efficiency & Conservation Authority (EECA) | Email: Pramesh.maharaj@eeeca.govt.nz Mobile: +64 (021) 600 9481 |
| Vince Smart Energy Efficiency & Conservation Authority (EECA) | Email: Vince.smart@eeeca.govt.nz Mobile: +64 (021) 403 610 |
| What are your activities / interests? Developing government policy and programmes to improve energy efficiency and reduce ghg emissions. | |
| What are you interested in finding out at the symposium? Practical ideas and actions for implementing change. | |
| Bob Weston Entec Services | Email: bob.weston@entec.co.nz Phone: +64 (09) 227 2211 Mobile: +64 (027) 663 6344 |
| What are your activities / interests? Renewable energy, biogas, industrial and hazardous area electrical installation. | |
| What are you interested in finding out at the symposium? Future technologies that complement our current offerings. | |
| Noel Kortright Environmental Management Services | Email: Noel.kortright@emslimited.co.nz Phone: +64 (04) 568 2319 Mobile: +64 (027) 453 3731 |
| What are your activities / interests? Environment, Energy, Geothermal Energy, Renewable energy. | |
| What are you interested in finding out at the symposium? Approaches to meeting target, opportunities for EMS to assist with meeting target. | |
| Glen Davies The Flue Shop | Email: glen@theflueshop.co.nz Phone: +64 (04) 569 694 Mobile: +64 (027) 844 3999 |
| What are your activities / interests? Solid fuel heating i.e Wood burning. | |
| What are you interested in finding out at the symposium? Answers and direction. | |
| Linda Thompson Fonterra Co-operative Group | Email: Linda.Thompson@fonterra.com Mobile: +64 (021) 816 854 |
| What are your activities / interests? | |
| I am the Energy Manager at Fonterra which includes responsibility for delivering Fonterra's energy strategy. | |

This strategy includes an objective to reduce emissions and using natural resources efficiently. To achieve this objective it includes progressing options to reduce emission intensity, as well as supporting the research and development of alternative renewable energy sources.

What are you interested in finding out at the symposium? I am interested in contributing to the discussion about what activities and options are available, as well as learning from other attendees, about what could be done to reduce emissions in New Zealand.

Michael LeRoy-Dyson
Fulton Hogan

Email: Michael.leroy-dyson@fultonhogan.com
Phone: +64 (09) 580 7172
Mobile: +64 (0274) 850 514

Brian Carey
GNS Science

Email: b.carey@gns.cri.nz
Phone: +64 (07) 376 0167
Mobile: +64 (021) 965 361

What are your activities / interests? Geothermal energy; Direct use geothermal energy opportunities; national energy targets.

What are you interested in finding out at the symposium? Geothermal energy; Direct use geothermal energy opportunities; national energy targets.

Melissa Climo
GNS Science

Email: m.climo@gns.cri.nz
Phone: +64 (07) 376 0160
Mobile: +64 (021) 247 6013

What are your activities / interests? Direct use geothermal energy opportunities; national energy targets, regional economic development.

What are you interested in finding out at the symposium? Direct use geothermal energy opportunities; national energy targets.

Samantha Alcaraz
GNS Science

Email: s.alcaraz@gns.cri.nz
Phone: +64 (07) 376 1781
Mobile: +64 (021) 026 10362

What are your activities / interests? Geothermal energy, geomatics.

What are you interested in finding out at the symposium? Industrial symbiosis, co-generation

Richie Singleton
Greater Wellington Regional Council

Email: richie.singleton@gw.govt.nz
Mobile: +64 (021) 740 656

What are your activities / interests? I am a Strategic Advisor at GWRC and oversee the implementation of the council's Climate Change Strategy – which is designed to align and coordinate climate change actions across GWRC's responsibilities and operations.

What are you interested in finding out at the symposium? The entire conference program is of interest – but top of mind right now: What regional councils can do to help sectors achieve greater emissions reductions more rapidly. Potential for emissions reduction opportunities to be realised via bioenergy, solar, wind and electric technologies. Development of action plan.

Dave Bodger
Gull New Zealand

Email: davidb@gull.co.nz
Phone: +64 (09) 489 1452
Mobile: +64 (021) 278 7737

What are your activities / interests? Fuel

Dr. Wolfgang Scholz
Heavy Engineering and Research Association
(HERA)

Email: exec@hera.org.nz
Phone: +64 (09) 262 4848
Mobile: +64 (021) 945 159

What are your activities / interests? Research association with heavy metals based engineering industry interests.

What are you interested in finding out at the symposium? Heavy engineering industry contribution.

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| Rik Deaton Heron Investments | Email: odeaton1@gmail.com Phone: +64 (03) 443 5825 Mobile: +64 (021) 280 1018 |
| What are your activities / interests? Development of a proprietary system for energy self sufficient protected environment local-for-local. | |
| What are you interested in finding out at the symposium? Horticulture | |
| This is a very major R&D effort that will be entirely self-funded. I hope to find out how to either get government to help or at least how to barge them out of the way, so I can get on with it. | |
| Dr Hugh Barr INFOSMART | Email: hugh@infosmart.co.nz Phone: +64 (04) 934 2244 Mobile: +64 (027) 686 0063 |
| What are your activities / interests? Effective responses to transitioning from fossil fuels and other GHGs to renewable. Interest in geothermal. | |
| What are you interested in finding out at the symposium? What bioenergy interests can contribute. What a bioenergy transition plan would look like. | |
| Jake Roose Kapiti Coast District Council | Email: Jake.roos@kapiticoast.govt.nz Phone: 64 (04) 296 4846 Mobile: +64 (022) 687 1980 |
| What are your activities / interests? Local government – vehicle fleets, wood fuel, building efficiency, generating or purchasing renewable electricity | |
| What are you interested in finding out at the symposium? How to work together to bring about faster change | |
| Peter Fredricsen Materials Processing | Email: peter@materialsprocessing.co.nz Mobile: +64 (0274) 929 040 |
| What are your activities / interests? Bioenergy. Gasification of waste and Torrefaction producing Biocoal. | |
| What are you interested in finding out at the symposium? Regulatory amendment to facilitate distributed generation. | |
| Myles Guy Ministry for Primary Industries | Email: Myles.guy@mpi.govt.nz Phone: +64 (06) 348 9462 Mobile: +64 (021) 246 4812 |
| What are your activities / interests? Forestry, ETS, permanent forests, afforestation, sustainable land management. | |
| What are you interested in finding out at the symposium? Learning more about bioenergy from forestry residues. | |
| Rita Lowe Craig Salmon Ministry for the Environment | Phone: +64 (04) 439 7400 |
| What are your activities / interests? Climate change policy. | |
| What are you interested in finding out at the symposium? Stakeholder views on climate change policy. | |
| Alexandra Seton Ministry of Business, Innovation and Employment | Email: alexandra.seton@mbie.govt.nz Phone:: +64 (04) 901 2489 |
| Clem Arlidge Ministry of Business, Innovation and Employment | Email: clem.arlidge@mbie.govt.nz Phone: +64 (04) 901 2203 |
| Jamie Kerr Ministry of Business, Innovation and Employment | Email: jamie.kerr@mbie.govt.nz Phone: +64 (04) 901 9816 Mobile: +64 (021) 819 826 |
| Marcos Pelenur Ministry of Business, Innovation and Employment | Email: Marcos.pelenur@mbie.govt.nz Phone: +64 (04) 901 9887 |
| What are your activities / interests? Principal policy advisor on energy efficiency and renewable energy. | |
| What are you interested in finding out at the symposium? The trade-offs between interventions. | |

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| Peter Brown Miscanthus New Zealand | Email: peter@miscanthus.co.nz Mobile: +64 (027) 498 4241 |
| <p>What are your activities / interests? Miscanthus, Renewable diesel, biochar.</p> <p>What are you interested in finding out at the symposium? How / whether the government will get involved in achieving the targets that it has set.</p> | |
| Gerard Dobbs Natures Flame | Email: Gerard.dobbs@naturesflame.co.nz Phone: +64 0800 735 538 Mobile: +64 (027) 289 7169 |
| <p>What are your activities / interests? Miscanthus, Renewable diesel, biochar.</p> <p>What are you interested in finding out at the symposium? How / whether the government will get involved in achieving the targets that it has set.</p> | |
| Karen Lavin Bella Whittle Office of the Parliamentary Commissioner for the Environment | Email: karen.lavin@pce.parliament.nz bella.whittle@pce.parliament.nz Phone: +64 (04) 471 1669 |
| Paul Young The Morgan Foundation | Email: paul@morganfoundation.org.nz Phone: +64 (04) 385 1697 Mobile: +64 (027) 418 8841 |
| <p>What are your activities / interests? I do research/analysis and communication on climate change issues with the Morgan Foundation and Generation Zero. I have a general interest in decarbonisation of the NZ economy, particularly the energy and transport sectors.</p> <p>What are you interested in finding out at the symposium? Viable pathways for NZ to meet or exceed the Government's 2030 target through domestic action. Information about potential scale and cost-benefit analysis of specific measures. What is needed from governments to deliver potential emissions reductions?</p> | |
| Catherine Leining Motu Economic and Public Policy Research | Email: Catherine.leining@motu.org.nz Phone: +64 (04) 939 4250 Mobile: +64 (027) 290 8923 |
| <p>What are your activities / interests? Policy research on low-emission pathways for New Zealand and emissions trading.</p> <p>What are you interested in finding out at the symposium? Options for technically and economically feasible decarbonisation pathways for NZ's energy sector, and practical steps for making them happen?</p> | |
| Simon Arnold National Energy Research Institute (NERI) | Email: simon@neri.org.nz Mobile: +64 (027) 248 1753 |
| Spence McClintock Ngati Tuwharetoa Geothermal Association | Email: Spence.mcclintock@nthl.co.nz Phone: +64 (07) 323 4192 Mobile: +64 (027) 201 2656 |
| Ian Gordon NZ Bus | Email: ian.gordon@nzbus.co.nz Mobile: +64 (021) 371 676 |
| <p>What are your activities / interests? Migration of the public transport diesel bus fleet to electric buses.</p> <p>What are you interested in finding out at the symposium? Progress within the transport sector on adapting electric vehicle technologies.</p> | |
| Grenville Gaskell Blair Walter NZ Wind Energy Association | Email: grenville@nzwea.org.nz Phone: +64 (04) 499 5048 Mobile: +64 (027) 244 1049 |
| <p>What are your activities / interests? Wind energy.</p> <p>What are you interested in finding out at the symposium? The level of support for wind energy to contribute to meeting NZ's climate change obligations.</p> | |

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| Adam Jarvis Palmerston North City Council | Email: adam.jarvis@pncc.govt.nz Phone: +64 (06) 356 8199 |
| What are your activities / interests? Climate change mitigation/adaption and sustainability. | |
| What are you interested in finding out at the symposium? Local government policy options. | |
| Adam Peren Perennial Energy Ltd | Email: adam@peren.co.nz Phone: +64 (021) 659 360 |
| What are your activities / interests? Producing renewable energy. | |
| Tony Rhodes PGG Wrightson Consulting | Email: trhodes@pggwrightson.co.nz Phone: +64 (0)6 374 4640 Mobile: +64 (0275) 901 456 |
| What are your activities / interests? Biogas, bioenergy crops. | |
| Jonathan Suggate Pioneer Energy | Email: jonathan.suggate@pioneerenergy.co.nz Mobile: +64 (021) 829 942 |
| What are your activities / interests? Renewable generation and bioenergy. | |
| What are you interested in finding out at the symposium? Insight into the industry views on the future market outlook and priority opportunities for delivering the national climate change targets. | |
| Mary Ann Mitchell Pioneer Energy | Email: maryann.mitchell@pioneerenergy.co.nz Phone: +64 (021) 302 152 |
| Michael Henry Pioneer Energy | Email: michael.henry@pioneerenergy.co.nz Mobile: +64 (021) 241 5846 |
| What are your activities / interests? Low carbon energy. | |
| What are you interested in finding out at the symposium? Learning what other industry participants think on low carbon energy and government policy relating to this. | |
| Richard Ireland Pioneer Energy | Email: Richard.ireland@pioneerenergy.co.nz Mobile: +64 (027) 733 2461 |
| What are your activities / interests? Wood fuel and future markets associated. | |
| What are you interested in finding out at the symposium? Strategies and directions for the near future. | |
| Tim Jackson Pioneer Energy | Email: Tim.jackson@pioneerenergy.co.nz Mobile: +64 (021)754 263 |
| What are your activities / interests? Energy solutions / industrial heat. | |
| Christian Jirkowsky Polytechnik Biomass Energy | Email: office@polytechnik.co.nz Phone: +64 (06) 211 3496 Mobile: +64 (021) 477 202 |
| What are your activities / interests? With over 33,000 kW of installed and sold wood waste fuelled heat plants in New Zealand and Australia the last three years New Zealand based Polytechnik Biomass Energy became the most important designer, manufacturer and supplier of advanced and high efficiency wood energy plants in Australasia. Industries using Polytechnik's know-how and technology include the Horticulture, the Sawmilling, the Wood Processing and New Zealand's Dairy Industry as well as Government/ Healthcare Buildings (e.g. Burwood Hospitals's new Energy Centre). Globally Polytechnik installed over 3,000 wood fuelled energy plants the last 50 years. | |
| What are you interested in finding out at the symposium? Opportunities to help interested Councils, Government Agencies or companies to switch from an intensive to a low carbon energy business without compromising reliability and availability. Polytechnik Biomass Energy is happy to provide interested parties with an unbiased advice and, if viable and economic, with state-of-the-art biomass energy plants utilising New Zealand's wood and forest residues. | |

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| Simon Millar Pure Advantage | Email: simon@pureadvantage.org Mobile: +64 (021) 828 397 |
| James Malthus RCR Energy Systems | Email: james.malthus@rcrtom.com.au Phone: +64 (06) 872 7634 Mobile: +64 (027) 886 0500 |
| What are your activities / interests? RCR Energy has a long history of providing energy plans for industrial sites around the world. | |
| What are you interested in finding out at the symposium? Current issues and future opportunities in the thermal energy sector. | |
| Marc Rands Royal Society of New Zealand | Email: marc.rands@royalsociety.org.nz Phone: +64 (04) 470 5754 |
| What are your activities / interests? Climate mitigation options. | |
| What are you interested in finding out at the symposium? Costs of different actions. | |
| Toby Stevenson Sapere Research Group | Email: tstevenson@srgexpert.com Phone: +64 (04) 915 7616 Mobile: +64 (021) 666 822 |
| What are your activities / interests? Energy consultant, interested in transport innovation | |
| What are you interested in finding out at the symposium? Whether there is a gap between what we can do and what will actually happen once everyone makes their individual decisions. | |
| Ian Suckling Scion | Email: ian.suckling@scionresearch.com Phone: +64 (0)7 343 5899 Mobile: +64 (021) 0234 0344 |
| What are your activities / interests? Liquid biofuels research and development. | |
| Chris Bathurst Solray Systems /Solvent Rescue | Email: chris@solray.com Phone: +64 (0)3 366 5018 Mobile: +64 (027) 205 2069 |
| What are your activities / interests? Biofuel. We make WTI Crude Oil from biomatter such as Algae, Wood, and waste biomatter | |
| What are you interested in finding out at the symposium? We are interested in partnering opportunities with financial sources, and what funding options are available. | |
| Phil Jones Sustainable Business Network | Email: phil@sustainable.org.nz Phone: +64 (0) Mobile: +64 (021) 835 146 |
| What are your activities / interests? Promoting the shift to a low carbon economy by 2050, across all sectors. SBN represents over 500 businesses across NZ. We have a range of low carbon projects. | |
| What are you interested in finding out at the symposium? The work that other parties are doing, and how we can collaborate. | |
| John Irving Sustainable Energy Forum – Guest Editor | Email: JRIrving@xtra.co.nz Phone: +64 (09) 445 1651 Mobile: +64 (027) 445 1661 |
| What are your activities / interests? Electricity and transport. | |
| What are you interested in finding out at the symposium? What should be done to promote Distributed Generation (PV, batteries, electric cars etc) through Regulation. | |
| Ian Shearer Sustainable Energy Forum | Email: office@sef.org.nz Mobile: +64 (021) 184 8915 |
| What are your activities / interests? Sustainable energy technologies and systems. | |
| What are you interested in finding out at the symposium? Smart transport and smart grids. | |

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| Molly Melhuish Sustainable Energy Forum | Email: melhuish@xtra.co.nz Phone: +64 (04) 568 4873 Mobile: +64 (027) 230 5911 |
| <p>What are your activities / interests? Clean and efficient home wood burning both in existing and older wood burners, and new types of wood gasifiers, and alternative wood types such as chips cut to a shape that can be used in modified pellet burners etc.</p> <p>What are you interested in finding out at the symposium? Meeting with others who could demonstrate and promote, and plan for (e.g. city councils) a rapid expansion of wood burning: this requires pricing structures able to reflect the value of reducing winter evening electricity peak loads. I can discuss the trends in regulation which are increasingly protective of the asset values of both big retailers, and distribution companies.</p> | |
| Steve Goldthorpe Sustainable Energy Forum Media – EnergyWatch | Email: Steve.Goldthorpe@xtra.co.nz Phone: +64 (09) 432 0532 Mobile: +64 (0274) 849 764 |
| <p>What are your activities / interests? Responding to the Climate Change challenge. Editor of EnergyWatch for the Sustainable Energy Forum.</p> <p>What are you interested in finding out at the symposium? Practical actions that can be taken in New Zealand and exploring how barriers to those actions might be overcome.</p> | |
| Gregor Steinhorn Unitec Institute of Technology | Email: gsteinhorn@unitec.ac.nz Mobile: +64 (021) 719 672 |
| Jonathan Leaver Unitec Institute of Technology | Email: jleaver@unitec.ac.nz Mobile: +64 (021) 636 574 |
| <p>What are your activities / interests? Research Commercialisation, Research Collaborations</p> <p>What are you interested in finding out at the symposium? Current state of research into sustainable energy in New Zealand.</p> | |
| Professor Rosalind Archer University of Auckland, Geothermal Institute | Email: r.archer@auckland.ac.nz Phone: +64 (09) 923 4517 |
| <p>What are your activities / interests? Renewable energy, petroleum energy, geothermal energy.</p> | |
| Dr Janet Stephenson Centre for Sustainability, University of Otago | Email: Janet.stephenson@otago.ac.nz Phone: +64 (03) 479 8779 Mobile: +64 (021) 279 8779 |
| Rachel Butler Venture Southland | Email: Rachel@venturesouthland.co.nz Mobile: +64 (027) 827 0917 |
| <p>What are your activities / interests? Sustainability is helping Southland grow as a region – a range of projects including methane recovery off dairy effluent ponds, the Wood Energy South project in conjunction with EECA, converting business to woody biomass boilers and electric car promotion in the region.</p> | |
| Councillor Andy Foster Rod Boys Adrian Mitchell Emily Taylor-Hall Wellington City Council | Email: Moana.mackey@wcc.govt.nz Phone: +64 (04) 803 8317 Mobile: +64 (021) 227 8317 |
| <p>What are your activities / interests? Cr Foster – Transport and Urban Design. Rod, Adrian and Emily – Waste</p> <p>What are you interested in finding out at the symposium? Networking and what local government can do to assist industry.</p> | |
| Jo Douglas Waikato Institute of Technology (WINTERC) | Email: jo.douglas@wintec.ac.nz Phone: +64 (07) 858 7526 Mobile: +64 (027) 283 6032 |

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| Steve Alesech Z Energy Limited | Email: Steve.alesech@z.co.nz Mobile: +64 (021) 949 009 |
| What are your activities / interests? Distributor and marketer of fossil fuels and biofuels. What are you interested in finding out at the symposium? Current renewable energy activity, projects and opportunities in NZ. | |
| David Jacobson Z Energy Limited | Email: David.jacobson@z.co.nz Phone: +64 (0)4 498 0205 Mobile: +64 (021) 373 453 |
| What are you interested in finding out at the symposium? Technically feasible low carbon options. Technically feasible hydrocarbon replacement energy sources. | |
| Emily Watt Z Energy Limited | Email: Emily.watt@z.co.nz Mobile: +64 (027) 436 4336 |

We welcome your involvement.

Contact us:

- Please contact Brian Cox at executive@bioenergy.org.nz regarding queries you may have about the symposium.
- Conference material and presentations will be posted on open access on the Bioenergy Association website event on the symposium webpage <http://www.yeswecan.nz/>.
- Who's Who booklet - please contact admin@bioenergy.org.nz for any amendments to this document.



Audience – part view



Hon Simon Bridges, Minister of Energy and Resources, addressing the “Yes we can!” symposium

