

FRIDAY FORUM #30
Future paradigms for Energy

Friday, 17 February 2012, 9am – 12 noon

at

**University of Auckland
Faculty of Engineering
Room 1.439**

Speakers

Dr Trevor Stuthridge, GM – Sustainable Design, Scion

Dr. Will Barker, VP External Affairs, LanzaTech NZ Ltd

Eric Pyle , Chief Executive, New Zealand Wind Energy Association

Dr Trevor Stuthridge is General Manager – Sustainable Design at Scion, a CRI. The Sustainable Design Group is dedicated to i) renewable energy and waste treatment technologies, ii) industrial ecology and life cycle management, iii) optimising forest sector value chains using advanced decision support tools/software and iv) innovation in the built environment.

Trevor has a PhD from the University of Waikato. He is an Adjunct Professor at the University of Toronto and a member of technical/management committees for a broad range of international research organisations, universities and stakeholder companies.

Trees – New Zealand’s future oil wells?

New Zealand’s reliance upon imported fossil fuels is a major issue for future energy security and supply - 90% of our liquid transportation fuel is currently imported at a cost of about NZ\$6 billion per annum. Our forest plantations may be the only substantive national resource for significant replacement of fossil fuels.

This presentation will provide an overview of Scion’s feedstock, technology and sustainability research in the biofuels arena and its pursuit of opportunities to replace products derived from depleting petrochemical resources with bio-based equivalents.

Dr. Will Barker VP External Affairs for LanzaTech.

Will also directs LanzaTech's patent portfolio and leads LanzaTech's IP strategy geared toward rapid technological development and commercialization.

Will joined LanzaTech from one of New Zealand's top patent attorney firms and specialized in biotechnology. Prior to this, Will spent several years as a forensic examiner, assisting NZ police with the investigation and decommissioning of illicit drug laboratories.

The LanzaTech Process

Will's presentation will outline how The LanzaTech Process can convert carbon monoxide containing gases produced by industries such as steel manufacturing, oil refining and chemical production, into valuable fuel and chemical products.

Eric Pyle, Chief Executive, New Zealand Wind Energy Association

Eric took up the position of CEO of the New Zealand Wind Energy Association in July 2011.

Before joining NZWEA Eric was Director, Environmental and Social Development at the Ministry of Research, Science and Technology. Energy was part of Eric's portfolio at MoRST. Before joining MoRST Eric worked for the Royal Forest and Bird Protection Society, the World Wide Fund for Nature. Eric has also worked for the Ministry for the Environment, Department of Conservation and for an environmental consultancy in the UK.

Wind generation in New Zealand: 2030

Eric will present a vision for the development of the wind industry out to 2030.

This is a free lecture – all are welcome
RSVPs are essential - Email vicky@thesustainabilitysociety.org.nz

The Sustainability Society is a Learned Society established to foster the discipline of sustainability engineering and science as the study of complex systems. The Society provides training and information sessions on sustainability through its workshops, seminars, forums and bi-annual international conferences.

Formerly, NZSSES, The New Zealand Society for Sustainability Engineering and Science is rebranding in preparation for the 5th International Conference – *Sustainability by Design: breaking the silos*.

The Sustainability Society is a Technical Interest Group of the Institution of Professional Engineers of New Zealand and an Affiliated Organisation of the Royal Society of New Zealand.

Sustainability Forums

The Sustainability Society hold regular forums aimed at exploring different engineering and science sectors and their approach to sustainability. The forums are morning sessions and comprise brief presentations from guest speakers followed by a facilitated discussion.

The aim of these Forums is firstly to give the speakers the opportunity to outline their understanding of the topic, and secondly, and perhaps more importantly, to provide the background information to resource what is hoped – and expected to be - a stimulating and forthright discussion.

Topics to date:

- *Forum 29 – Sustainable Transport for Auckland* (Nov 2011)
- *Forum 28 – Peak Oil – Its impacts* Christchurch (Sept 2011)
- *Forum 27 - Peak Oil: NZs response* Auckland (July 2011)
- *Forum 26 – Sustainability and the Auckland Plan*, Auckland (May 2011)
- *Forum 25 – Future of Buildings*, Auckland (March 2011)
- *Forum 24 – Peak Oil – are we ready?* Auckland (Sept 2010)
- *Forum 23 - Clean Tech, Green Tech & Sustainability Research*. Auckland (July 2010)
- *Forum 22 – Future of Food*, Auckland (Apr 2010).
- *Forum 21 – Future of Transport*, Christchurch (Apr 2010)
- *Forum 20 – Sustainable Water Supply for Auckland*. (Feb 2010)
- *Forum 19 – Conservation v Mining*. Auckland (October 09)
- *Forum 18 – Sustainable Air Quality for Auckland* (Sept09)
- *Forum 16 – Auckland: Sustainable Transport* (July 2009)
- *Forum 15 – Auckland: Complexity, Innovation and Decision* (May 2009)
- *Forum 14 – Auckland: Municipal Three Waters* (April 2009)
- *Forum 13 – Christchurch: Blueprints for Sustainable Infrastructure Conference Papers* (March 09)
- *Forum 12 – Auckland: Sustainable Housing* (Sept 2008)
- *Forum 11 – Christchurch: Strategies for Canterbury Water* (Aug 2008)
- *Forum 10 - Auckland: Sustainable Electricity* (July 08)
- *Forum 9 - Auckland: Biofuels* (May 2008)
- *Forum 8 – Christchurch: Water: Supply and Storage* (March 2008)
- *Forum 7 – Auckland: Future thinking and Frontier Design* (Feb 2008)
- *Forum 6 – Auckland: Carbon Trading* (Oct 2007)
- *Forum 5 – Auckland: Sustainable Transport: Cars and Congestion* (Aug 2007)
- *Forum 4 - Auckland: Governance and Sustainability* (Sept. 2006)
- *Forum 3 – Auckland: Consultants and Sustainability* (May 2006)