



Biofuels Research/Development in New Zealand

Research News

- Scion Report - [Biofuels Science Symposium and Action Plan \(Feb 2011\)](#)

Transportation biofuels and co-products derived from grasses, wood, and algae have the potential to displace a significant proportion of fossil-based fuels and chemicals in New Zealand. To fully exploit this opportunity requires a coordinated scientific research effort across New Zealand's research organisations. As a first step along this path, Scion - the lead Crown Research Institute in wood related bioenergy¹ - hosted a Science Symposium on Next Generation Liquid Biofuels and Co-Products in December 2010. This Symposium was the first of its kind in New Zealand and provided a forum for the New Zealand biofuels research community to share their science, engage in scientific debate, and learn about international developments in the biofuels areas.

The Symposium intended to complement other fora with a policy or commercial focus to ensure that appropriate synergies between research and development activities are built and that collective work remains both leading edge and relevant to the needs of New Zealand.

New Zealand companies involved in research in the liquid biofuels area are listed below:

| Company / Contact | Details |
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| <p>Solray / Solvent Rescue Website: Solvent Rescue Contact: Chris Bathurst and BL Rayners Ltd Contact: Wayne Harpur Christchurch</p> | <p>Research/Development Activity: Algae - 'turning sewage algae into crude oil. Process is now operational but commercial testing unlikely until April 2009. Articles:</p> <ul style="list-style-type: none"> • OilGae Blog -Jan 09 • OilGae Blog -Jan 07 • Southland Times Article |
| <p>NIWA (National Institute for Water and Atmospheric Research) Contact: Rupert Craggs</p> | |
| <p>Aquaflow Bionomic Corporation Contact: Nick Gerritsen, Marlborough</p> | <p>Algae - biofuel from wild algae harvested from open-air environments; currently building a pilot</p> |

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| <p>Website: Aquaflowgroup.com</p> <p>Email: aquaflowgroup</p> | <p>plant capable of producing 1 million litres annually.</p> |
| <p>Cawthron Institute</p> <p>Contact: Mike Packer, Nelso</p> <p>Website: Cawthorn Instituten</p> | <p>Algae - study of the prospects for land-based aquaculture in New Zealand. Basic research on the utilisation of micro-algae as an energy source</p> |
| <p>Scion</p> <p>Contact: Elspeth MacRae, Rotoru</p> <p>Website: SCIONa</p> | <p>Pulp and paper - Scion and AgResearch have partnered with San Diego-based Diversa on a feasibility study to determine whether or not a pulp and paper mill can be converted to turn its waste into biofuel.</p> <ul style="list-style-type: none"> • NZTE • NZFOA |
| <p>BioJoule (now part of Pure Power Global)</p> <p>Contact: Jim Watson, Taupo</p> | <p>Salix - BioJoule was launched in 2006 with a commitment to energy farming and a three-pronged business approach for using the woody crop salix. When the shrub is harvested, says founder Jim Watson, it can provide cellulose for the production of transport ethanol; lignin for a plastic substitute; and xylose as a sweetener with non-diabetic properties.</p> <ul style="list-style-type: none"> • NZTE • Genesis |
| <p>Alternative Energy Solutions Ltd (AES)</p> <p>Contact: Gavin Hedley, Pukekohe, Auckland</p> | <p>Biomass Liquefaction via pyrolysis - Pyrolysis of wood waste (hogged forest residue) to produce bio-oil. Significant advantage of mobile in-forest operation as bio-oil is a liquid fuel with about double the energy density of a hog fuel.</p> <p>Plant under construction in Auckland.</p> <ul style="list-style-type: none"> • BANZ and Massey Energy Research workshop - 12 March 2008 |
| <p>Lanzatech</p> <p>Contact: Dr Sean Simpson, Auckland</p> | <p>CO and Waste gases - Lanzatech has developed a technology to allow high volume industrial waste streams to become a resource for bio-ethanol production. This technology has been developed and demonstrated in their purpose built laboratory. The company is now embarking on a process refinement and scale-up plan. The process uses microbes to</p> |

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| | <p>convert CO and other industrial gases into ethanol.</p> <p>Articles:</p> <ul style="list-style-type: none"> • NZ Herald • Dominion Post • Chemical &Engineering News |
| <p>New ZealandCentre for Ecological Economics (NZCEE) Contact: Vickie Forgie Website: NZCEE</p> | <p>Bioenergy Options for New Zealand Project - including a focus on the use of canola for biodiesel</p> |

If your details are not in this table and you would like them to be – [contact us](#)