



NZ Biofuels Potential

The New Zealand Advantage

On the back of the previous Government's Biofuels Sales Obligation several fledgling industry companies have invested several million dollars in good faith and in the belief that they had a sound future. Without doubt the change in approach has not suited all in the industry but one thing is clear, the present uncertainty will make it increasingly impossible for them to produce and/or market biofuels simply because the requirements are not clear. What this industry needs is a clear policy from Government so that business plans can be progressed.

The benefits of using liquid biofuels are many and more than justify a Government stimulus package to facilitate the growth of a New Zealand biofuels industry/market. The advantages to the New Zealand economy are two-fold: Firstly, they are internal to New Zealand and secondly, they have an impact on an international scale.

Within New Zealand the advantages are economic in nature - enhanced security of fuel supply; the reduction of raw materials sent off shore for processing; the securing of so-called 'green-collar' jobs; and the value maximisation of otherwise poor quality land. Furthermore, the advantages are environmental in nature - the reduction of CO₂ emissions from transport, heating and stationary equipment applications will assist towards meeting our Kyoto commitments as well as making a tangible difference to the environment in which we live and breathe. Finally, the advantages have a health impact too - reduced transport emissions will have a positive effect on respiratory health. This aspect is pertinent to our major cities, where the rise in PM₁₀ emission levels is of concern.

- **Enhanced security of fuel supply** - indigenous supply of fuel - security of supply especially for New Zealand essential services in times of need.
- **Value added New Zealand raw materials that are currently exported** - the processing of these resources on New Zealand soil bring economic growth advantages by reducing our reliance on imports and providing an increased local taxation base.
- **Employment "green collar" jobs** - the job creation potential is both direct and indirect via multiplier effect.
- **Value maximisation of land** - improved utilisation of land and value creation without rural communities e.g. rotational oilseeds, salix based cellulose to ethanol. Some biofuel crops may well also utilise otherwise poor quality and low value land thus providing increase value for land owners.
- **Reduction of 'wastes' to landfill** - many current bio-waste going to landfill are indeed bio-resources - dairy industry waste lipid streams, grease trap waste and some forestry waste is currently land-filled and yet could be converted into good quality biofuels.
- **Mitigating Kyoto agreement liability due to reduced net GHG emissions from transport** - Reduced CO₂ emissions by direct displacement of fossil fuels.
- **Positive health impact** - grass roots improvements in workplace health, biofuels produce far less emissions and don't contain carcinogens and harmful polyaromatic cyclic hydrocarbons (true for both biodiesel and bioethanol). One only needs to refer to the Brazilian experience from using bioethanol and how it has helped to clean up the air in their cities.

From an international perspective, the advantages that investment in liquid biofuels offers to New Zealand are also economic in nature - international investment opportunities), and they are reputational (evidence to support the 'clean green' image New Zealand likes to portray abroad').

- **Investment in R&D and biofuel manufacturing** - developing an industry platform for the eventual deployment of 3rd generation technologies, i.e. establish a proven track record of capability that would provide for future investor confidence, growth of

a strong knowledge base and enhanced skill set, e.g. ITO Biofuels, stimulate R&D, promote market acceptance and familiarity with the use and handling of biofuels. (This is a very important aspect and one should not underestimate the learning curve required for successful implementation), capability to harness is less discerning indigenous feedstocks, e.g. Waste lipid streams.

- **Tourism growth by reinforcing the NZ "Clean & Green" image** - in this respect several New Zealand tourism focused companies are already leading the way (Air New Zealand for example). The potential to actively promote New Zealand as an eco-tourism destination (e.g. Great Barrier Island) is significant as interest in so-called eco-tourism is seen around the globe. New Zealand's 'clean - green' image is often overplayed. The use of sustainably produced New Zealand sourced biofuels would further enhance this reputation.