



The Bioenergy Association of New Zealand

Biodiesel Grants Scheme – Progress Report 21 February 2011

1. Introduction

The Bioenergy Association of New Zealand (BANZ) represents the main producers of biofuels in New Zealand. Since its inception, BANZ has given its full support to the Biodiesel Grants Scheme as a means of providing enough biodiesel to establish a following, to facilitate fleet and other trials and to become comfortable with the use of biodiesel as a fuel. It has also been a means of allowing producers to gain experience of quality standards and regulatory requirements.

This note sets out a brief progress report covering sales of biofuels under the Scheme within the context of total sales of biodiesel for all uses. The progress report also highlights a number of key successes during the past 12 months arising from the Scheme; and looks to the future for the Scheme and the on-going contribution of the Scheme to the expansion of the biodiesel sector in New Zealand. The report notes also the important contribution biodiesel makes to the New Zealand economy, how today's 'conventional' biofuel producers are paving the way for the onset of biofuels from wood, otherwise known as 'advanced' biofuels, and how over the coming decade biofuels present significant spin-off opportunities worthy of note, not least of which is the production of 'green chemicals' as plastic, pharmaceuticals and adhesives.

The primary value in having biodiesel produced in NZ through the Grants Scheme is all about getting experience with alternative fuels and diversifying New Zealand's fuel mix. It presents the opportunity for New Zealand to think about transport fuel alternatives, to use 'local' organic matter (eg used cooking oil, wastes etc) which would otherwise be

Biodiesel Highlights – 09/10

Retail Sales - Gull NZ announces the sale of biodiesel in its forecourts and report strong sales.

EECA Clusters Replicate – the original Queenstown initiative has now been replicated and is active in Marlborough with Rotorua soon to be operational and other areas under consideration.

FIVE-fold Increase in Sales – Sales under the Biodiesel Grants Scheme alone have increased 5 fold since the beginning of the Scheme with signs of a significant boost to sales since July 2010 when the criteria of the Scheme were extended to B100.

Implementing the Bioenergy Strategy – the Bioenergy Strategy released in July 2010 with across the board support indicated a key role for biofuels indicating that they could supply 30% of the country's transport fuels.

International Green Credentials – the popularity of biodiesel as a real alternative continues to rise in particular in tourist linked operations and those conscious of their carbon footprint. Many users have been committed to B20 and above long before the Scheme applied to the B100 level.

Media Recognition – Biodiesel focused articles and reports in the press are now an everyday occurrence as interest and uptake increases. At the November EECA Awards, 14 out of the 23 nominated projects had a biofuel link.

Plans for a Biodiesel Accreditation Scheme – The Bioenergy Association announced draft plans for an accreditation scheme – a means to provide additional quality and reliability assurance to potential users.

PCE Report July 2010 – the Report (amongst other aspects) recommends the extension of the Grants Scheme beyond 2012 and that its coverage be broadened to include non-transport fuels.

disposed of, to add credence to the 'clean-green' mantle and increasingly to look to the future and to the eventual production of advanced biofuels from wood. These are the drivers and the opportunities. The *NZ Bioenergy Strategy* has identified that the production of advanced biofuels will be primarily built on getting increased value from forest and waste residues leading to economic growth from new farm energy crops. The production of biodiesel using current conventional feedstocks and technologies is in itself not the goal, but provides a key foundation for growing the sector to achieve national economic growth.

So to the Grants Scheme. The success of the Scheme is without question in the respect that it has facilitated getting biodiesel into the market – something that otherwise would not have occurred. It has allowed those producers who had already built production facilities prior to the commencement of the Scheme to produce fuel which is now available to vehicle users. Those producers are currently at maximum capacity (or near to it) and the Scheme has delivered a five-fold increase in sales in a 12 month period. As a result of the availability of biodiesel stories and articles about its use are receiving widespread media coverage which is assisting vehicle users gain confidence in the use of biodiesel in their vehicles. . Users range from every day motorists, haulage firms, rally drivers, tour operators (land and sea) and more. The economic benefits arise because New Zealand is making use of waste oil; facilitating an extra income from farmers growing canola; diverting wastes and creating resources; and is developing home grown understanding and skills in biodiesel production and use.

Despite the successes achieved to date the limitations on the term of the Scheme has produced a significant barrier to new entrants who have yet to build their production plant to meet increasing demand for biodiesel, and some current players who are struggling to continue. The result being that the full potential of the Scheme has been not achieved.

2. Background

Biodiesel Grants Scheme - The Biodiesel Grants Scheme was introduced in July 2009 as a replacement for the repealed Biofuel Sales Obligation (BSO). The BSO was repealed in December 2008.

The 2009 Budget set aside \$36 million in grant funding for the Scheme for a period of three years – due to come to an end (unless extended) in June 2012. In effect, \$9 million, \$12 million, \$15 million is available to participants over the respective three years of the Scheme.

The Scheme offers those producers producing over 10,000 litres of biodiesel per month a 42.5 cent per litre supplement. Initially the Scheme covered only blends up to B20 (20% biodiesel). In July 2010, the Scheme was extended from this original B20 limit to include for blends above B20 up to B100. This was a welcome move not only for those who are able to take part in the Scheme, but in terms of the bigger picture, where a wider range of biodiesel users were able to be introduced to biodiesel. However the extension did not cover the full range of uses (excludes use in boilers for heat applications) and as a result has precluded access to the full range of diesel substitution opportunities.

Players in the Sector – The New Zealand ‘transport biofuels sector’ is on the small side by international standards. Currently the number of biodiesel producers is around 5-6. This includes those who participate in the Grant Scheme and others. Currently, Grant Scheme participants average about 3 in total sometimes increasing to 4 or dropping to 1 depending on their ability to qualify for the grant in a particular month (i.e., being able to cross the 10,000 litres production threshold). The other producers who are not yet Scheme participants because of their lower production volumes sit outside the Scheme and while they don’t benefit from the Scheme grants, they are clearly benefiting from increased interest amongst fuel users in biodiesel as a fuel alternative.

Except for the fact that there are producers sitting outside the Scheme, BANZ believes that the grant threshold is important and set at the right value and level. Extending the term of the Scheme would be enough for the current non participating producers to commit to building bigger production plant.

Except for sales by Gull NZ, most biodiesel sales are wholesale (whether under the Scheme or outside of the Scheme) - direct to users from the producers themselves, or through initiatives like the EECA Biodiesel Clusters where effectively a group of users club together.

Biodiesel became available for retail sale as part of a Mobil trial in 2009. In late September 2010 Gull NZ introduced the fuel on the forecourts of its Auckland stations. The biodiesel sold by Gull NZ is supplied by EnvironFuels who is a Scheme participant. This initiative was a natural and significant step towards making biodiesel available to mainstream consumers and is a consequence of the growing confidence that the sector is developing. Biodiesel is a good initiation into the biofuels market for heavy vehicle fleet owners as they often have their own discrete sources of fuel. Gull NZ report strong sales of its biofuels.

The growing demand for biodiesel and the confidence being shown by users in its quality and use has started to give the motor vehicle fuel retailers more confidence to the degree that BANZ believes that several others will enter the market soon. This will have been reinforced through the supply by Gull NZ of biodiesel at some of its retail outlets.

Feedstocks – Current feedstocks in use in the New Zealand biodiesel sector are predominantly used cooking oil (UCO), rapeseed/canola and to a lesser extent tallow. In the short term future expansion of biodiesel production will be from increased use of tallow, UCO and rapeseed/canola. However over the longer term production is expected to also come from lignocellulose from wood residues and energy crops. The *NZ Bioenergy Strategy* assesses that these latter feedstocks using advanced biofuel technologies) will allow up to 30% of transport fuel to come from Bioenergy by 2040 and provide significant economic growth opportunities. The focus for today’s feedstocks (generally from waste) is to secure market growth and customer acceptance of biodiesel as a viable alternative to mineral diesel and to build industry capability in readiness for later expansion through advanced biofuels.

Researchers – Biofuels generally and biodiesel in particular is the focus for a number of research organisations in New Zealand. Public sector research investment focussed on biofuels totalled \$54million over the last 5 years but is currently dropping to near nothing. This lack of research is of

significant concern when the sector is looking towards establishing a \$3-5billion industry yet there is little research being undertaken.

Continued investment in both conventional and advanced biofuels is crucial to the medium and longer term expansion of biofuels in New Zealand through the transfer and adaptation of international research. New Zealand is well represented on the international scene with both public researchers in touch with international research programmes, and private researchers/developers catching the eye of international investors and media, however we need to do more to assist the transfer of international knowledge and experience from the researchers to the investors. The current biodiesel market that has arisen because of the success of the Grants Scheme has assisted develop the international contacts amongst researchers.

Opportunities for Diversification – As with any emerging industry sustaining early success is an ongoing challenge. Several companies currently operating in the biofuels space are diversifying to spread their risk. For some this means the production of animal feed alongside biodiesel, for others it means the development of engineering expertise in process design and technology and production components, for example, filters. This diversification is matched in the production of ethanol from wood with production of valuable ‘green chemicals’ such as lignin and xylose as additional products.

The existence of the emerging biodiesel market because of the scheme has given confidence to a number of potential international investors who have both a biochemicals/biomaterials and a biofuels interest to look to New Zealand for investment. Several potential investors have established development teams domiciled in New Zealand, such is the high interest and confidence in New Zealand that they have obtained. The Grants Scheme has assisted in providing that confidence.

Regulatory environment – It has been possible to test the regulations for the production and retail of biodiesel because of the level of production that has occurred as a result of the Grants Scheme. The regulations around motor vehicle fuels are both related to quality assurance and excise duty. This is a new area for those outside the traditional motor fuel sector and thus the means of compliance to the regulations has needed to occur. The fuel quality specifications have also been able to be tested through the availability of biodiesel in the market. This would not have happened without the availability of fuel arising from the availability of grants.

3. Growth in Uptake

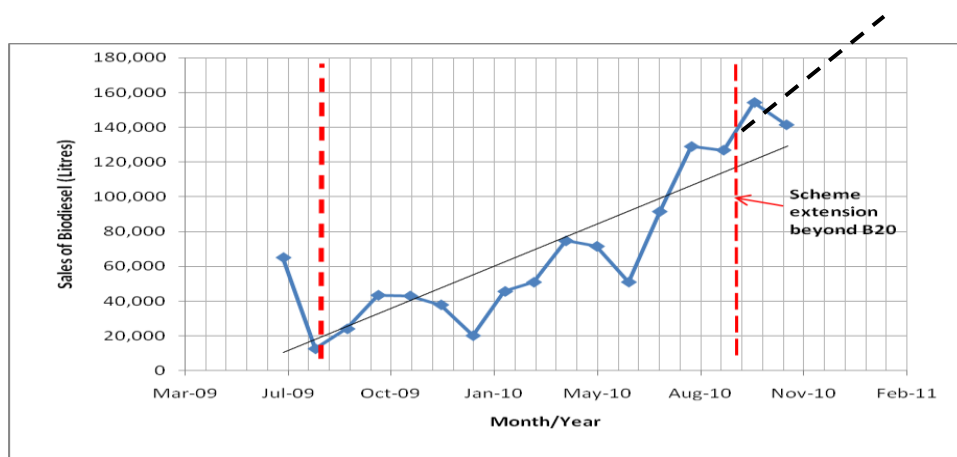
Biodiesel which qualifies under the Biodiesel Grants Scheme is summarised in Figure 1.

Figure 1 illustrates the growth in biodiesel qualifying sales over the duration of the Scheme. The trend is clearly upward representing as much as a five-fold increase in sales over a 12 month period¹. This five-fold increase in the short life of the Scheme to date reflects the start-up from

¹ Dips in chart can in part be explained by the number of participants in the Scheme (which vary from a month to month basis) where some of the smaller players may be holding back some fuel in one month in order to accumulate fuel and so qualify for the grant through the Scheme in the following month.

scratch phase of the industry but is an indication of what is possible as the Scheme matures. The chart only presents qualifying sales recorded through the Grants Scheme. It's important to note that while total sales under the Grants Scheme were just over 1 million litres up until the end of October 2010 these figures only tell part of the biodiesel success story. Industry experts estimate² total national biodiesel sales to have exceeded **1.5 million litres which represents 0.1% of total national diesel sales**. Those sales not meeting the Grants Scheme qualifying criteria and so falling outside of the Scheme are estimated to account for **0.5 million litres**. Sales not meeting the Grants Scheme conditions could include those selling above and beyond B20 blends, those not meeting the threshold sales limit, and biodiesel that does not meet the specification as set out in the Engine Fuel Specifications Regulations (EFSR). **Volume sales of biodiesel for heating fuel are roughly estimated at in excess of 0.4 million litres** and are included in this overall sales total.

This is 1.5 million litres of fuel which would otherwise be mineral diesel.



Source: <http://www.eeca.govt.nz/node/6059>

Figure 1: Biodiesel Grants Scheme Qualifying Sales July 09 – November 2010.

Monthly sales in October 2010 peaked at just under 160,000 litres. To date the Scheme has paid out a total of just less than half a million dollars.

4. Challenges, Successes and what the Future Holds

The Challenges – in the initial period of the Scheme some of the small biodiesel producers struggled to meet the Scheme qualifying criteria each month. They suffered, as do many small and medium sized businesses, to balance the competing demands of running a small business - to run the business and to attract badly needed investment in order to carry on at all. Many of the producers were also not able to attract sufficient investment necessary to put in additional plant and thus maximise their production levels. Even now when they are more established they cannot afford to invest in equipment for expansion, or additional vehicles necessary to collect increased

² Data is not available from one small biodiesel producer who is not a BANZ member so an estimate of their production has been included in the estimation for total sector biodiesel production.

volumes of feedstock. This investment would allow them to further increase their throughput and so participation under the Grants Scheme.

For a number of the larger players in the sector BANZ is aware that there are some poised and waiting to come on line but who also are finding it difficult to secure that final investment before operations can proceed. Many of these producers have full sales ledgers going forward but are struggling to secure investment. The fact that the Scheme is due to come to an end is the single most important factor holding back a further step increase in production and sales in particular for these larger operators. A lack of investor confidence in the future of the Scheme has the potential to shelve a number of developments currently waiting in the wings.

Support and Supporting Activities – There have been a number of exciting and productive supporting activities that have occurred alongside the Scheme that have without doubt encouraged uptake of biofuels and improved the broad understanding of the merits of biodiesel use. In particular we note the activities of EECA and NZTE and their efforts to highlight biofuels and the experiences of others. EECA's cluster initiatives have been particularly successful and several initiatives aimed at raising awareness and boosting consumer confidence is coming to fruition. The success of biofuel projects in the recent EECA Annual Awards is confirmation that they are an exciting opportunity and that they are becoming mainstream.

BANZ also notes and welcomes the Report by the Parliamentary Commissioner for the Environment, "**Some biofuels are better than others: Thinking strategically about biofuels**", July 2010³. In particular we note Recommendation 3 in the report as follows:

The Minister of Energy and Resources modifies the Biodiesel Grants Scheme in the following ways:

- Requiring biodiesels to be used for transport to meet higher specifications***
- Providing partial subsidy for low-specification biodiesel for uses such as boilers and generators***
- Allowing biodiesels other than fatty acid methyl esters to qualify for support***
- Guaranteeing the Scheme beyond June 2012.***

BANZ activities in 2009 and 2010 with NZTE focussed on New Zealand biofuels sector and have been working towards putting New Zealand biofuels on an international footing and in securing investor interest in the longer term future for the industry. Materials produced as part of this relationship have helped to spread information further afield about the merits of biodiesel and the experiences of users.

Currently work is under way on the use of biodiesel in urban areas as a mechanism for reducing vehicle air emissions.

Research – New Zealand's national research commitment to biofuels is significant with over \$54million Invested on a range of programmes as noted earlier. Research is a fundamental

³ <http://www.pce.parliament.nz/publications/all-publications/some-biofuels-are-better-than-others-thinking-strategically-about-biofuels>

component of developing the future biofuels market in New Zealand. Current operators have a key role to play in establishing the market and developing user confidence but hand in hand with this, researchers take the lead on moving us forward from today's feedstock's to those of the future. It will be imperative that the industry and research sectors work hand in hand to ensure that the biofuels future in New Zealand is successful.

Measure of Success – Without doubt the Biodiesel Grants Scheme has been a major success in times of economic uncertainty. Sale figures demonstrate a significant jump in production. Grants distributed under the Scheme may appear to be small relative to the funds set aside for the Scheme and it's important that this issue is addressed and explained.

At the outset of the Scheme, \$36 million was set aside for grant payments over three years. It is unclear exactly how this amount was agreed but it is fair to say that the economic climate at the time of the Scheme launch was significantly more stable than it is now. The economic downturn has limited the availability of investment monies generally and investors have been increasingly wary about where they invest their money. At the time of announcement of the Scheme, leading biodiesel producers in New Zealand were gearing up to high production levels but many were relying on a positive investment environment and a mandated purchase of their product.

However since the removal of the mandated biofuel purchases investment money has been difficult to obtain and a number of potential producers are still chasing badly needed investment dollars prior to commencing production. Some smaller producers are also struggling to attract investment and as a result are unable to meet demands for biodiesel. In one particular case, a lack of external investment means an inability to collect feedstock to produce more biodiesel and so meet orders. Overall competition for investment dollars is strong and investors are seeking signs of a longer term future for the Scheme. It's important that the \$36 million continues to be available and that there is a strong positive signal about the success of the Scheme so far and its medium to longer term future. These messages will give investors the confidence they need to invest in biodiesel.

The uptake in biodiesel sales since the commencement of the Scheme is from an original low base but has been matched by a hugely positive customer feedback and positive media coverage of uses ranging from rally sport, haulage, boat and off-road tourist tours. In such a short space of time biodiesel has gained a loyal following and has gone from being a virtually unknown fuel to being a mainstream fuel in the New Zealand transport fuel market place.

At the time of the announcement of the Scheme there were several potential producers who were well advanced with their investment plans on the strength of a mandated market but dropped out when the mandate was lifted. Other potential producers however were happy to invest without mandated purchases but required simply a longer time for the Scheme to operate. BANZ would encourage the Government to extend the term of the Scheme so that this latter group can participate.

A final comment on the \$36 million is this. It's important that the dollars available are put into context - at a time of strong economic growth the money set aside for grants seemed realistic. In the event of the economic downturn, where investment \$ were less available and investors wary, producers had to scale back earlier predictions. Despite biodiesel being a new fuel to users in New

Zealand and despite the economic downturn, Figure 1 shows clearly growth and growth and all the elements of a successful Scheme so far if in somewhat of a challenging environment.

Business viability – The grants scheme has ensured that a fledgling industry has been able to be established with its consequential contribution to employment both at the producers, and through feedstock suppliers. The scheme also gave a limited investment confidence to those producers who continued with plant already built. The limited scope of the scheme however limits further investment.

Extension of the scheme will allow fuel producers to achieve scale over a period of time building on the experiences gained from the operation of the current plant. In addition it has added financial value to the farmers now growing rapeseed as feedstock as they have a revenue stream linked to a third fuel market and not their normal cereal markets. The food plus fuel business gives them greater business resilience. An extension of the grants scheme would allow this market to develop.

Producers advise that they are reaching the stage where they need to put a brake on pursuing additional sales as they are unable to commit to additional investment unless the scheme is extended or there is a fundamental shift in diesel prices.

Future opportunities for economic growth – The role of today's biofuel producers cannot be underestimated. Current producers are pioneers of New Zealand's biofuel future as they work towards establishing a market and customer loyalty for biodiesel. These individuals and organisations are paving the way with their so called 'conventional' biofuels to a future in which 'advanced' biofuels will dominate. Fortunately for New Zealand, the dominant feedstock for 'advanced' biofuels is wood in the form of cellulose. But the opportunities do not stop here as some New Zealand companies are already showing. Bioenergy is only part of the opportunity to be realised. Current biofuel producers are not only able to sell their engineering skills, but they are also able to sell animal feedstock, waste management and remediation expertise and the production of high quality chemical feedstock's (xylose and lignin for example). These are all additional spin-offs to the development of liquid biofuels and build on the platform created by the conventional biofuel producers.

As New Zealand invests a significant amount of funding towards bioenergy research, some of which is focussing on future feedstocks for biodiesel, it's essential that this investment comes to fruition. BANZ has been working on ensuring that research and industry are proactively engaged in developing an understanding of the bigger Bioenergy picture and that both groups understand where they can add value as part of the process to maximise returns on knowledge, understanding, technical insight etc all developed in relation to liquid biofuels production, use, and testing.

The Bioenergy Strategy released in July 2010, indicated a key role for biofuel in New Zealand. The Strategy noted:

"Economic growth and employment built on New Zealand's capability and expertise in growing and processing wood-crops and converting organic by-products to energy, leading to new business opportunities which by 2040 supply more than 25% of the country's energy needs, including 30% of the country's transport fuels".

Improved land use – The growing of canola as an energy crop in Canterbury is a good example of what the Grants Scheme has produced and is achievable on a much wider area through the planting of other types of energy crop. New Zealand has large areas of land where energy crops can be planted to give landowners a more diversified revenue flow, resulting in more resilient businesses. The land will dictate the appropriate species but in each case the energy crop is likely to complement existing forestry or farm practices. The Grants Scheme is encouraging land owners into considering these opportunities.

Enhancing the tourism image – The biodiesel clusters that have been established already are often successfully based around the tourism sector as the promotion of the clean green image that underpins the NZ tourism sector is significantly enhanced by operators having their vehicles using biodiesel.

The availability of canola grown locally has enhanced the quality of cooking oils as there has been a shift to using healthier canola oil instead of other cooking oils. Along with the recycling of cooking oil rather than dumping it into landfills has produced an additional revenue stream for restaurant owners as well as having provided them with a marketing angle supporting the NZ Clean image.

So who is investing in Biofuels? – In order to get a measure of just who is investing in New Zealand biofuels its important first to look to the oil companies. New Zealand company Gull NZ leads the way on the home front with three stations selling biodiesel and healthy sales of both ethanol at all their stations. On the international front, the level of oil company investment in biofuels is considerable. As BP invests in ethanol and biobutanol, Chevron looks to switchgrass. Exxon Mobil has opted to focus on algae while Shell's focus covers fuel from wheat straw and fuel from wood residue. Shell are also focusing on developing enzymes that rapidly turn plants into fuel and in developing partnerships that may lead to the production of biogasoline using technology that can process various kinds of feedstock. Total are investing in a biofuels company that makes renewable fuels from agricultural waste. For most, the levels of investment are many millions of dollars. Most are funding University lead research. These corporations know that they must look to the future and sustain their competitive edge.

New Zealand companies such as Lanzatech, Aquaflo and Ignite Energy NZ all have significant and notable investors. Each has a focus on the 'advanced' biofuels of the future in some shape or form. And, while investment in the future of biofuels is essential, as noted above, it is investment in the here and now that develops the market, secures the customers and lays the ground for that future. Other international companies are also looking at investing in New Zealand and have established development teams evaluating investment options.

Use as a boiler fuel - Currently and while the Scheme is specific to fuel which is intended for use in compression ignition internal combustion engines those industrial customers who would like to use biodiesel for heating water in a boiler are unable to benefit from the Scheme and thus gain experience of using biofuels. The Scheme limitation on the sale of biodiesel for such applications is a significant limit to market growth. The use of biodiesel instead of mineral diesel in any application has significant environmental benefits and additional sales would increase the confidence of new investors to enter the market.

BANZ notes that opening up the Scheme to use in non-vehicle applications would also be consistent with the Government's recently released New Zealand Energy Strategy and New Zealand Energy Efficiency and Conservation Strategy in that it enables businesses and industry to increase the amount of renewable energy they use, thus reducing their carbon emissions. In today's economic climate BANZ would suggest that the price differential would also be welcome for business. In order to secure the ongoing success of the Scheme we as an industry need to ensure that uptake is facilitated in every way possible.

Equity with ethanol – There is an anomaly within the fuels market where the excise tax levels on fuels other than biodiesel are set by regulation which has no termination date. Government support for Biodiesel is handled by way of the Grants Scheme which has a termination date. Government therefore can do nothing about ethanol and the support through the excise tax rate will continue post 2012 as at present, whereas a definite decision on the biodiesel grants needs to be addressed at that time or the Scheme drops dead. There is a strong argument for pricing policies for both ethanol and biodiesel to similarly continue post 2012.

Need for Biodiesel now – BANZ understands that there are a growing number of industries that are keen to use biodiesel as a means to reduce their carbon footprint. These include the wine industry, Air NZ (for ground based services) and companies such as Fonterra. All have an international image, operate in increasingly competitive markets where 'green' can be a significant point of difference and all who are concerned with the carbon footprint or food miles. In addition, the tourist industry is a growing advocate of biodiesel as its use is very much part of the 'clean green' image of New Zealand promoted to its clients overseas.

These are significant needs now that can only be met with diesel alternatives. The interest of these companies and those like them represent real opportunities and our focus has to be on working to meet their demands with increases in production capacity.

These companies are increasingly embracing biodiesel as an essential part of their day to day business. Without a NZ biodiesel industry they have no access to these fuels. Their needs are potentially large and will require the assistance of an oil company to blend and deliver these fuels.

Sector business development – The Grants Scheme has allowed the producers to establish themselves as viable business able to provide a foundation for the growth of the sector. Because of the limitations on availability of feedstocks there were never ever going to be more than a small number of producers. The producers who have established have needed a confidence in the market to encourage capital investment. To a degree the Grants Scheme has done that for those already producing, however for those not in production at the start of the Scheme the limited term of the Scheme has been a constraint.

For those producers who have established under the Scheme there has been a slow build up of production capability as many started nearly from scratch and they have had to not only put in plant but have had to establish quality management processes, many of which had not yet been established at the time of the Scheme commencement.

The smaller producers have also had to face the problems of any small business where development has had to be funded from cash flow. This has meant that development has been slow but gradual as revenue from sales has grown.

Consequences of closure of the Scheme – The closure of the Scheme is not something that BANZ wishes to contemplate but it's important to acknowledge that there would be consequences. Aside from potentially significant financial losses to producers and their subsequent closure (we note similar such examples in Europe), notable other impacts of the Scheme demise potentially include:

- Jobs lost in the sector – directly and indirectly,
- Investment, knowhow and skills lost to alternatives offshore,
- Lost platform for the introduction of advanced biofuels with subsequent economic growth for additional value from forestry and economic growth for land owners.
- Research \$ invested in biofuels fails to bear fruit; future biofuels research questioned,
- Questions asked about the inconsistency between New Zealand's hailed 'clean green image' and a lack of 'green' fuels despite abundant feedstock; potential impact on the tourism sector.
- The industry falters and production goes underground with potentially damaging consequences in terms of quality and reliability,
- Related opportunities including the development of 'green chemicals' are lost,
- Lost opportunities in relation to the ability to deliver on some Government policy relating to energy, climate change, reduced carbon emissions and climate change impacts.
- Lost opportunities to broaden New Zealand's transport fuel base and to move, in line with the rest of the world, to a greener transport profile.

5. Discussion and Recommendations

The New Zealand biodiesel market is one with significant potential for future economic growth from the use of waste and land. However there is no hiding the fact that it is currently a small market and many potential users have no experience of the use of biofuels in their vehicles.

Despite this, growth in sales is clearly evident and the vast majority of users report very positive experiences (see [NZ Experiences – Learning from Others](#) on the BANZ Liquid Biofuel web-site).

BANZ analysis across the sector has indicated that if the Scheme's original criteria were changed to include sale for any use and the Scheme term was extended there would be an immediate doubling of the biodiesel sales. This would follow the success already shown by sales in June 2009 which were approximately 52,000 litres but then post July 2010 when the Scheme criteria were partly extended, sales began to increase with 92,000 litres reported in July 2010, 130,000 litres in August 2010 and 155,000 litres reported for October 2010.

The expansion of the Scheme up to and including B100 has gone some way to improve the situation and the sales reflect this but two significant and pressing issues remain and need to be addressed as part of the planned review of the Scheme – that is – confirming a longer term future

for the Scheme and the opportunity presented by wider application beyond the internal combustion engine.

While the number of producers is still small this is probably a consequence of the Scheme only due to exist into early 2011. To maintain the current growth rates and to ensure that biodiesel is available to users a clear signal about the longer term future of the Scheme is essential and urgent.

A primary benefit of the current Scheme and the encouragement that it is giving to those participating is that it is resulting in the production of volumes of fuel that each week allows additional new vehicle users to gain experience and confidence in the use of biofuels. As more vehicle users become comfortable with the use of biofuels there will be a greater need for additional volumes of fuel and there needs to be adequate production capacity ready to meet that increased demand or we will go through a go/stop situation which will undermine the confidence already achieved and building a platform for progression at a later time to advanced biofuels.

The current Scheme provides an invaluable mechanism to “kick start” the biofuels industry. However doubt over the future of the Grants Scheme is hampering investment for larger scale projects. In BANZ view, New Zealand needs a stable long term vision that is encapsulated in a policy/legislative framework. Without this commitment, some economic growth developments achieved to date will be lost. With a longer term commitment will come:

- Improved investor confidence to invest in capital projects
- Encouragement to landowners to engage with the Biofuel industry
- Commitment to assign resources to R&D projects.

BANZ has recommended in previous communications to government the need for the industry to be supported through the extension of the Grants Scheme for a further 3 years. An alternative option is for a migration towards an alternative arrangement that is matched to realistic capacity of the industry and market demand.

New Zealand biodiesel producers have demonstrated an ability to grow and thrive in a very short space of time. The potential in the sector is significant and the recent extension of the Scheme criteria has been a welcome boost to many. However, growth in production and sales remains restrained for as long as the long term future of the Scheme is in doubt and while the Scheme is applicable only to internal combustion engines.

BANZ notes the following recommendations and we highlight also those of the Parliamentary Commissioner in her July 2010 Report.

BANZ Recommendations

- The Scheme review is held as a matter of urgency
- The Review considers increasing the duration of the Scheme for a further 3 years. Committed funds in 2009 should continue to be earmarked for this purpose.
- The Review considers expansion of the Grant Scheme to beyond transport use.

PCE Recommendations

PCE Report, *"Some biofuels are better than others: Thinking strategically about biofuels"*, July 2010, Recommendation 3:

The Minister of Energy and Resources modifies the Biodiesel Grants Scheme in the following ways:

- *Requiring biodiesels to be used for transport to meet higher specifications*
- *Providing partial subsidy for low-specification biodiesel for uses such as boilers and generators*
- *Allowing biodiesels other than fatty acid methyl esters to qualify for support*
- *Guaranteeing the Scheme beyond June 2012.*