

Work in progress regulatory impact statement: development of new fuels legislation and investigating mandatory targets for biofuels sales in New Zealand

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Note: proposals for new fuels legislation and the investigation of mandatory targets for biofuels are both at a preliminary stage, and further in-depth investigations of the costs, benefits and risks will be required before final proposals are put forward for approval.

Statement of the nature and magnitude of the problem and the need for government action

The Renewable Energy Target (2002), which was developed as part of the National Energy Efficiency and Conservation Strategy 2001 (NEECS), included a 2 petajoule (PJ) indicative target (about 1% of transport energy use in 2004) for the transport sector in order to signal the longer-term pathway required for sustainable transport energy.

Despite having had a 2 PJ indicative renewable transport fuel target since 2002 and the government taking active steps to pave the way for the introduction, there are still no transport biofuels being used in commercial quantities in New Zealand. In order to meet or exceed the indicative 2PJ target from locally sourced biofuels, there is a need for commercial biodiesel production and/or a considerable expansion in ethanol production. Market forces alone are not achieving this.

Transport biofuels are manufactured from plant or animal material. Ethanol is made from starchy material such as plant or dairy processing waste, whereas biodiesel is made from vegetable oil or animal fats. The two main types of biofuel likely to be available in New Zealand are ethanol from whey (for blending with petrol), and biodiesel made from tallow or waste cooking oil.

The following barriers to the introduction of biofuels have been identified:

- **Risk of vehicle damage:** Some vehicle manufacturers' representatives are reluctant to accept more than 3% ethanol for use in second hand vehicles imported from Japan, on the basis that this is the regulated level in Japan. On the other hand, fuel companies are not interested in ethanol blends below 5% because they are not seen as economic. Fuel companies are waiting for a clear signal from Japanese manufacturers that 5% ethanol is acceptable. Further work is required to assess the probable real costs associated with vehicle issues;
- **Varying real price of oil:** Fluctuating oil prices make it difficult to justify long term investment in biofuels. Investment decisions for new facilities/expansions need to take account of possible future oil price decreases – so investment is unlikely;
- **Externalities of mineral diesel are not accounted for:** In the existing system, some environmental and social costs associated with mineral fuels are not fully accounted for in their pricing, and as a result, the price of biodiesel (and to a lesser extent ethanol) appears high relative to the price of diesel (and petrol). There is no feasible way to reflect the environmental benefits (other than via the carbon charge) from using biofuels, especially biodiesel;
- **Inability to set mandatory quality controls for non-petroleum fuels:** The Ministry of Energy Abolition Act 1989 (which provides a regulation making power to control the quality of petrol and diesel) does not provide a mechanism for regulating the quality of biofuels, biofuels blends, or any future fuels. Oil companies, biofuel producers and consumers need the certainty of regulated quality specifications before they will introduce and use biofuels blends.

Statement of the public policy objective

The public policy objectives of the proposal are:

- to contribute to meeting Government commitment to Kyoto protocol obligations to reduce greenhouse gas emissions from all sectors including transport
- to contribute to environmental sustainability by increasing the use of renewable transport fuels in New Zealand
- to ensure that producers provide transport fuels of a guaranteed quality and which are fit for purpose, and that consumers have access to such fuels

Statement of Feasible Options (Regulatory and/or No-Regulatory) That May Constitute Viable Means For Achieving the Desired Objective(s)

Uptake of Biofuels

Status Quo

In order to encourage the production and use of transport biofuels in New Zealand, the Government has undertaken a number of initiatives:

- the Petroleum Produce Specifications Regulations were amended in 2002 to allow up to 10% ethanol to be blended with petrol although there is no specific provision for biodiesel blends;
- Environmental Risk Management Authority approved ethanol-petrol blends;
- the excise-free status of denatured fuel ethanol has been clarified; and
- an indicative voluntary target of 2PJ by 2012 has been established
- investigations of the costs and benefits of biofuels, providing information to key stakeholders and developing voluntary quality specifications.

Locally produced ethanol, sourced from dairy industry by-products is available in sufficient quantity to replace 0.2 to 0.3% of petrol, with imported ethanol being readily and cheaply available, particularly from Brazil.

There is no significant commercial production of biodiesel in New Zealand at present, due in part to the absence of a biodiesel production plant of adequate scale. There is enough tallow raw material available to manufacture biodiesel sufficient to replace 5% of diesel, though this tallow is currently traded for other uses.

The indicative renewables target of 2PJ equates to 1% of transport fuels by 2012.

The Ministry of Energy Abolition Act 1989 contains the regulation making power to prescribe “specifications to which refined petroleum products of the class or classes specified in the regulations must conform when supplied in New Zealand”, although the current Petroleum Product Specifications Regulations 2002 include a specification that petrol may contain up to 10% ethanol. However the Act cannot be used to regulate mandatory quality specifications for biofuels or mineral fuel-biofuel blends or impose mandatory biofuels sales targets. A broader legislative framework for transport fuels generally is warranted to provide for biofuels and any new transport fuels, as well as petroleum fuels.

The ineffectiveness of the voluntary target and associated initiative over the last three years, and the limited extent of the Act suggests that these are insufficient to generate production and use of transport biofuels, and this option of maintaining the status quo is not preferred.

Option 1: Financial incentives – to meet objective 1, 2

Fuel ethanol is already excise-free, but this is not sufficient to stimulate its production and sale for use in transport fuels. Tax is recovered from diesel vehicle owners via road user charges, a tax on the vehicle and the use made of it rather than via excise-duty on the fuel. It is not possible to give an excise concession for biodiesel when there is no excise on diesel.

A detailed review of possible financial incentives (commissioned by the Energy Efficiency and Conservation Authority) has suggested that these are considerably less effective than simply mandating that a certain quantity of biofuel be used. Financial incentives are not preferred as a primary mechanism for encouraging biofuels use, but further work on financial incentives as a supporting mechanism will be undertaken as part of the further policy investigation.

Option 2: Mandatory blending target – to meet objective 1,2

A blend target would require that a certain quantity of biofuels be added to every litre of petrol and diesel. A blend target would provide fuel of a uniform quality to consumers. A blending target is, however, relatively inflexible regarding implementation. It would apply to all of the relevant conventional fuel sold (petrol or diesel) and therefore has a nationwide impact. It would also apply at all times making it difficult to adjust to variable supply constraints. As well, it would affect all consumers (petrol or diesel) and therefore prevents the targeting of consumer groups that are least responsive to price changes or can benefit most.

Option 3: Preferred option: mandatory sales targets – to meet objective 1,2

A sales target would require that a certain percentage of fuel sales from each company be biofuels.

The preferred option at this stage of analysis is a sales target for biofuels across the board (as opposed to a target for ethanol and a separate target for biodiesel). In practice this would mean:

- For each company importing or distributing petroleum transport fuels, a set percentage of the total annual combined petrol and diesel sales volume would be required to be replaced with biofuels which meet the appropriate fuel quality specifications;
- The company would be able to decide which biofuels to use, when, where and at what percentage blend;
- Companies would need to report on annual sales of petroleum fuels (as at present) and biofuels sales.

Transport fuels legislation

Option 1: Amend the Ministry of Energy Abolition Act 1989 – to meet objective 3

This option would extend the regulation making power contained in the Ministry of Energy (Abolition) Act 1989 to enable regulations to be made for non-petroleum fuels. This is not the preferred way forward.

The existing arrangement for regulating petroleum products alone via this legislation is less than desirable as the Act was not designed for this purpose, and the regulation making power is only included as a miscellaneous provision in an Act designed for other purposes. If this option was pursued, these problems would continue. The existing regulation making power only refers to specifications for fuels, so if this option were pursued, the scope of the regulations would need to be broadened to accommodate policies such as mandatory targets.

Preferred option – New Fuels legislation – to meet objective 3

This option would provide the opportunity to draft clear and comprehensive legislation with a clearly stated purpose. It would cover all fuel products that Government is likely to regulate, now and in the future. It could clarify the present ambiguity around the ability to regulate additives, blending, and what constitutes a “petroleum product”. New legislation could also enable measures such as mandatory targets and financial incentives to be established, if required.

Statement of the Net Benefit of the Proposal, Including the Total Regulatory Costs (Administrative, Compliance and Economic Costs) and Benefits (Including Non-Quantifiable Benefits) of the Proposal, and Other Feasible Options

A brief assessment of the costs and benefits of mandatory targets for biofuels is provided as the policy proposals are at an early stage of development. A full assessment of the costs, benefits and risks of mandatory biofuels use will be undertaken before reporting back to Cabinet seeking approval to proceed to make regulations permitting a mandatory sales target– if the analysis demonstrates that this option is cost effective and likely to achieve the objective of ensuring the production and use of biofuels in New Zealand.

Government

Comprehensive legislation that provides for both petroleum and non-petroleum transport fuels would enable the New Zealand Government to set and enforce regulations specifying fuel quality for current fuels and future fuels, and set targets (depending on outcome of further policy investigations).

Implementing new legislation may require an increase in resources to undertake ongoing quality enforcement and monitoring of an expanded range of transport fuels for retail sale. The Petroleum Fuels Monitoring Levy (PFML) presently only provides this function for petrol and diesel. New fuels legislation may require an increase in the resources allocated to reporting on fuels, for purposes such as the IEA monthly report.

The benefits and costs of a mandatory biofuels sales target depend on the target levels and timing. The main benefit is having a mechanism in place to ensure that the NEECS 2PJ target and any future targets are achieved. The costs could include administration and compliance monitoring costs of the target, funding of any consumer/producer incentives and information, and the possible cost of accepting liability for vehicle damage.

Industry

New fuels legislation would provide industry, as producers of transport fuels, with comprehensive legislation and regulations that specify the quality and enforcement of current and future petroleum and non-petroleum transport fuels for retail sale. This would give industry the same framework for quality assurance that applies to petroleum fuels, setting a benchmark and limiting the risks to their brands of negative exposure. Additional costs will be associated with requiring transport fuel producers to comply with an expanded range of retail transport fuels quality specifications (consultation with Government and biofuel producers, developing company quality assurance measures, implementation requirements such as fuel labelling) and to report to Government on this expanded range of transport fuels for purposes such as the IEA monthly report. It may be necessary for Government to increase the petroleum fuels monitoring levy, which is collected from fuel suppliers.

The benefits and costs of a mandatory biofuels sales target depend on the target levels and timing. In general the benefits are that a target would provide certainty of market to biofuels producers and oil companies, and that reduced levels of petroleum transport fuels have to be sourced, imported, and produced. The costs include additional reporting to demonstrate compliance with the target,

investment by oil companies in blending and distribution infrastructure (which they may not make if target was voluntary).

Society

New fuels legislation would provide comprehensive legislation and regulations that specify the quality and enforcement of current and future petroleum and non-petroleum transport fuels for retail sale, thereby providing consumers and non-consumers with assurance that retail transport fuel is fit-for-purpose. The costs could include an increase in the Petroleum Fuels Monitoring Levy to cover any additional costs associated with quality monitoring and enforcement of an expanded range of transport fuels. This may be passed on to transport fuel consumers.

The benefits and costs of a mandatory biofuels sales target are dependent on the target levels and timing. In general the benefits are that a target enforces partial replacement of petroleum fuels with biofuels and gives proportional health and environmental benefits.

Costs to consumers may change, as consumers may have no choice but to use biofuels and to pay the pump price, which could be higher or lower than the equivalent conventional fuel, depending on the future price of oil and biofuels raw materials.

Statement of consultation undertaken

Seventeen submissions were received in response to a letter the Minister of Transport sent to industry in March 2005 requesting feedback on mandatory biofuels targets, including a question on incentives. The issues raised are being taken into account in the development of policy, including:

- oil companies did not favour a blending target because it would reduce the flexibility to vary product ranges regionally, take account of seasonal variation in raw materials supply, provide consumers with choices and target urban fleets. The oil refinery and the independent retailer would find a blend target easier to ensure consistency of product and manage infrastructure. All groups saw problems with being required to provide national coverage.
- biodiesel producers were not in favour of a target which allowed shifting between biofuels types, preferring a product-specific blend target;
- motor vehicle industry groups expressed reluctance to accept mandatory targets/ethanol above 3% in the absence of good information on how this might affect the New Zealand fleet. A sales target was not favoured, the preference was a blend target;
- in terms of vehicle user groups, although a blend target was supported by the heavy transport industry (mainly diesel users), the AA opposed a blend target as it removes consumer choice, and feared additional fuel costs falling on consumers;
- Public transport operators were cautious about a target, and did not favour a blend target because they would prefer not to use biofuels in long distance services, but would rather use biofuels in urban services;
- Federated Farmers will not support a mandatory target until more is known about the costs, benefits, and opportunities for local industry.

An industry-consumer consultation group will be set up and consulted during the further policy development process.

Policy proposals are being developed and evaluated by the Ministry of Transport, Ministry of Economic Development, the Treasury, and the Energy Efficiency and Conservation Authority, in consultation with the Biofuels Officials Group (including representatives from the Ministry of Agriculture and Forestry, Ministry for the Environment, Investment NZ, NZ Customs)

Business Compliance Cost Statement

A business compliance cost statement will be prepared if the further policy investigation process identifies either a reduction or an increase in compliance costs for businesses affected by the proposals. It is unlikely that there will be any additional compliance costs associated with the enactment of new fuels legislation, in fact there may be an opportunity to reduce compliance costs.

If mandatory biofuels sales targets are introduced there is likely to be an increase in compliance costs to biofuels producers and fuels companies, due to:

- additional record keeping and reporting on quantities of biofuels sold
- additional fuel monitoring requirements

The oil refinery and five oil companies may incur a one-off cost to provide additional infrastructure (e.g. tanks, blending equipment).

Steps will be taken throughout the development of policy proposals to ensure that compliance costs are minimised, by discussing the implications of proposals with industry.