

23 July 2021

To: Ministry for Business, Innovation and Employment

From: Scion (the NZ Forest Research Institute LTD, trading as Scion)

Contact: [REDACTED]

RE: INCREASING THE USE OF BIOFUELS IN TRANSPORT

1. Key Points

- There is not enough here to encourage investment into domestic biofuels production. As discussed below, there are substantial other benefits to domestic biofuels, GDP, Jobs, energy security, biofuel availability. **Let's put the control of GHG emissions into our own hands, not rely on overseas activity.**
- All aspects of sustainability need to be investigated, particularly for feedstock grown overseas (incl. used cooking oil (UCO)); biodiversity, food vs fuel, child labour.
- Any fines should be recycled into encouraging the production of domestic biofuels

2. Introduction – Who is Scion.

- Scion is a Crown Research Institute with a core purpose to “enhance New Zealand’s prosperity, well-being and environment through trees – kia piki te ora, te taiao me te whai rawa o Aotearoa mā to ngāhere”.
- Scion led development of the New Zealand Biofuels Roadmap (www.scionresearch.com/nzbiofuelsroadmap)
- A range of other bioenergy related work;
 - Bioenergy Options for New Zealand Project (2007 to 2009); a part of the EnergyScape project.
 - Wood Energy Industrial Symbiosis Project MBIE funded).
 - Residual biomass fuel projections for New Zealand (EECA funded, 2017)
 - Potential for the use of wood-based energy in expanded and integrated primary processing in the Gisborne region - Report for the Forestry Ministerial Advisory Group (2019)
 - Ligno-cellulosic biofuels initiative
 - Stump to Pump project

Signed by

[REDACTED]

Withheld under section 9(2)(a)

Florian Graichen,
General Manager Forests to biobased products

Increasing the use of biofuels in Transport: consultation paper on the Sustainable Biofuels Mandate

Page	Question	Response
14	Do you support having a GHG emissions reduction mandate? If not, why?	Yes – delivers against the main target of the mandate of reducing CO2 emissions, and in a way that allows the most efficient solutions to emerge. This encourages the development of drop-in advanced biofuels, which is ultimately the only way to deliver major GHG emission reductions from biofuels due to the blend limits of conventional biofuels.
14	Do you support the proposal to support certification of lifecycle emissions of biofuels sold in New Zealand using international standards? If not, why?	Yes – but need clear direction about what international standards are relevant and acceptable, particularly for domestically produced biofuels. Need to be clear about the process for certification of these emission reductions, and who in New Zealand has the capabilities to do this. Any certification system needs to produce results that are consistent with systems used for other comparable fuels.
15	Do you support applying the Sustainable Biofuels Mandate to all liquid transport fuel? If not, why?	Yes. But should include international fuels (Marine and Aviation) too. Reporting against these fuel uses will happen soon too (IPCC AR6 draft scope). As a nation with an export focus, we should demonstrate leadership in this sector and including these will help get to the scale of production in NZ that is economic. Also, might be logistically difficult and more expensive for airports and ports to have domestic and international grade(s) of fuel, with and without biofuels, ie two parallel supply chain and distribution systems.
16	Are the proposed initial emission reduction percentages for 2023-2025 appropriate for New Zealand? If not, what should they be?	Yes, but should have a mechanism to encourage domestically produced biofuels. There needs to be at least an indication of what the levels post 2025 will be; i.e. >3.5% <??% by 3035 etc
17	Do you support having single GHG emissions reduction percentages across all fuels types, or do you favour separate reductions percentages? Why and how many separate percentages would you suggest we have?	A single reduction target across all fuels is not the right way forward. Whilst we will have a large “legacy” fleet in all transportation sectors for many years to come that will require liquid fuels, the rate of fleet change will be very different for the different sectors. The aviation and marine sectors will be extremely difficult to decarbonise and need special treatment. This becomes even more important when international fuels are targeted by the international community (UN IPCC) and industry bodies such as ICAO and IMO.

18	Do you support provisional emission reduction percentages being set for 2026-2030 and 2031-2035 with the percentages being finalised in 2024 and 2029 respectively? If not, why?	<p>No. I would rather see more definite reduction targets than provisional targets. Investment in domestically produced biofuels will want certainty about the emissions reductions (and therefore volumes) required to meet the mandate. Saying it is going to be more than 3.5% is not enough, particularly if 3.5% is already being supplied.</p> <p>Without clearer and definite long-term targets, fuel companies may “lock-in” to technologies that have no way of achieving the long term targets that NZ desires. Eg ethanol and conventional biodiesel blending would be a relatively easy way to meet the 2025 targets. However, due to blending maxima (10% ethanol in petrol, 7% biodiesel in diesel) reaching highly levels of GHG reduction will be difficult.</p> <p>It would be better to set these reduction targets now. The CCC has set carbon budgets out to 2035, this biofuels mandate should reflect that. A pathway to 2050 should also be described.</p> <p>It takes years to build the capability and capacity. We need to start now and therefore need the certainty of the demand to create the driver to act now.</p>
18	Do you support the proposal that biofuels producers must be certified against an established sustainability standard to count towards achievement of the emissions reduction percentage? If not, why?	Yes. But need to be clear what standards are acceptable. Maybe provide a list. The PCE did a report around 2010, Some biofuels are better than others. This needs to be taken into consideration. A powerful metric is energy return on energy invested. Anything with an EROIE less than 3 should not be eligible.
19	<p>Do you support having a joint fuel industry/government information campaign to inform New Zealanders about biofuels and the Sustainable Biofuels Mandate? If not, why?</p> <p>Do you support the labelling proposal that informs consumers about specific biofuels at the point of sale? If not, why?</p>	<p>Yes</p> <p>Yes. This will be difficult if a fuel supplier regularly changes the amount of biofuels it blends or the grade in which it blends biofuels. For instance, responding to availability of price points.</p> <p>Information from manufacturers on the suitability of biofuels / blends for specific vehicle is critical to getting uptake. Consumers will need confidence that their vehicle will not be damaged by the use of biofuels.</p>
19	Should New Zealand try to overcome the challenges that domestic biofuel producers face in maintaining access to affordable supplies of domestically produced	Yes. Domestic production of advanced biofuels using lignocellulosic feedstocks will be essential in addressing emissions reduction from the transport fleet, and therefore climate change. Domestically

	feedstocks? Do you have any suggestions for how this challenge could be overcome?	<p>produced biofuels have additional benefits other than just emissions reductions and should therefore be prioritised. These benefits include national and regional GDP increases and employment, and import substitution giving greater energy security and independence.</p> <p>Other policy mechanisms can be developed to encourage domestically produced biofuels or biofuels derived from non-food crops eg double counting of emissions (happens in other countries to promote certain types of biofuels), supporting of feasibility studies to attract investment in technologies, capital grants/loans etc, R&D funding into advanced biofuels</p>
20	Do you think the minimum threshold for compliance of 10 million litres of transport fuel in a calendar year in New Zealand is appropriate? If not, what level would you change it to?	<p>No. The mandate should apply to all suppliers.</p> <p>Maybe, they could be excluded from delivering the first two year targets to give them time to develop the necessary supply chain and processes, but they should adhere to the 2025 mandate and beyond.</p>
21	Do you agree with the method of calculating a supplier's GHG emission reduction? If not, why?	Yes, agree.
21	Do you think the annual reporting regime, including its offences and fines, is practical? If not, why?	Yes agree. It has to be done otherwise the public will have no confidence in the scheme
22	Do you support the performance of fuel suppliers being published to enable customers to reward the industry leaders in reducing GHG emissions? If not, why?	Yes, agree. Name and shame the bad performers
22	Will the proposed penalties encourage fuel suppliers to achieve the required emissions reductions? If not, would level should they be?	Need clarity around the definition of MtCO ₂ e. "Mt" could either be megatonne (million tonnes) or metric tonne. The normal scientific definition would be megatonne. If this was the case, this would be well in excess of any suppliers mandate and therefore no supplier would be penalised for non-compliance.
23	Do you support the proposal for fuel suppliers to defer achieving their emissions reductions for years 1 and/or 2, in full or in part, to the following year? If not, why?	No, disagree. 1kg of CO ₂ reduced has a bigger impact the earlier it is done. Therefore, we should not be encouraging suppliers to delay the incorporation of biofuels until as late as possible.
24	<p>Do you support fuel suppliers banking any surplus emissions reductions in a year and using it to reduce the percentage needed to be achieved the following year? If not, why?</p> <p>Do you support fuel suppliers borrowing for shortfalls in emissions reductions in a year, and making the shortfall up the following year? If not, why?</p> <p>Do you agree with the proposal to allow trading through the use of entitlement arrangements? If not, why?</p>	<p>Yes agree. As above, the earlier the reduction is achieved the better.</p> <p>No disagree. As in response to question on page 23.</p> <p>Yes agree. This could allow suppliers to collaborate on larger (more cost effective)</p>

		initiatives. Reduce the cost of meeting the mandate. Good for the suppliers, their customers and for New Zealand
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