

Monday, 26 July 2021

RE: SUBMISSION OF FEEDBACK TO THE MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT AND THE MINISTRY OF TRANSPORT'S CONSULTATION PAPER ON THE SUSTAINABLE BIOFUELS MANDATE

KiwiRail welcomes the opportunity to submit feedback on the Ministry of Business, Innovation & Employment and Ministry of Transport Consultation Paper titled "Increasing the use of biofuels in transport: consultation paper on the Sustainable Biofuels Mandate".

KiwiRail is committed to supporting New Zealand's goal of achieving a net zero carbon economy by 2050. As a commercial enterprise operating throughout New Zealand, we have a unique role to play in enabling ongoing improvement in the emissions performance of the rail sector and subsequently the transport sector.

It is important that we continue to build on our natural advantage as a low emissions transport solution, by identifying opportunities to reduce our consumption of fossil fuels and progressing towards a lower carbon future.

We broadly support having a GHG emissions reduction mandate as an end-user and KiwiRail are open to investigating the use of biofuels where suitable and feasible.

There are challenges limiting the roll out of biofuel in our fleets, including:

- Cost – biofuels are currently not cost competitive with fossil fuels.
- Supply – KiwiRail consumes large volumes of diesel (i.e. more than 70 million litres annually) and would need assurance that supply needs could be met.
- Quality – biofuels would need to meet particular fuel standards in accordance with Original Equipment Manufacturers (OEMs) requirements to be used within current assets and assets being procured (i.e. locomotives and ferries). The new ferries would be able to operate on biofuels depending on its viscosity.
- Blend – currently, most OEMs approached for mainline locomotives have endorsed a B5 blend in accordance with their requirements only. Use of grades higher than this have shown an increase in wear to components in the fuel injection system, resulting in reduced performance and increased maintenance costs. From an environmental perspective, measurable carbon reduction benefits from biofuel will not appear until the blend is increased to B10 or higher. KiwiRail seeks this information as part of its procurement considerations for new assets.
- Moving to B10 and higher – locomotive engines and the new ferry engines could be made compatible with B10+ biodiesel however it is unknown precisely what engine changes would need to be made and the time and cost to do so. Numerous problems associated with higher biodiesel blends (depending on biofuel source) have been identified, meaning it becomes more important to account for the impact biodiesel can have on the engine as the blend increases. Capability of different transport modes should be considered when establishing GHG emissions reduction percentages across fuel types – i.e. locomotive engines are not overhauled as quickly as large trucks and therefore may limit the percentage blend in which the locos can take compared to trucks.



- In order to trial biofuels, KiwiRail would need to progress controlled trials in partnership with engine manufactures to validate B10+ blends before moving to BAU fuel use. Trials of stronger blends are not recommended until B5 has been successfully rolled out.

In summary, KiwiRail is interested in transitioning to a viable alternative to diesel and is taking steps to be prepared for the change. It is essential that the alternatives provide end-users with sufficient quality and supply.

We would be happy to speak with officials directly regarding this submission.

