Australasian Railway Association

SUBMISSION

DEPARTMENT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT COMMUNICATIONS, SPORTS AND THE ARTS

CLEANER FUELS PROGRAM

POLICY DESIGN AND ENGAGEMENT PAPER

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OVERVIEW

The Australasian Railway Association (ARA) appreciates the opportunity to provide feedback towards the Department of Infrastructure, Transport, Regional Development, Communications, Sports and the Arts' (DITRDCSA's) request for input into the key design principles and framework of the Cleaner Fuels Program to drive domestic production of low carbon liquid fuels (LCLFs).

The rail industry is well positioned to support Australia's goals of reducing emissions 62-70 per cent below 2005 levels by 2035. Rail provides an inherently sustainable, low emissions mode of transport for both freight and passenger services. One commuter train has the capacity to take 578 personal vehicles off the road. In the freight sector, rail freight generates 16 times less greenhouse gas emissions than road freight, despite transporting more than half of Australia's national freight task.

However, despite rail's baseline position as a low-carbon option for transport, opportunity exists to further accelerate decarbonisation initiatives and the adoption of new technologies within the rail industry, supporting rail's continued capacity to offer emissions reductions for the transport sector as a whole.

Low carbon liquid fuels provide an opportunity to bridge the gap between current and future low-carbon technologies. Rail assets such as locomotives have a long lifecycle of 25-30 years, meaning the lag time for investment, development and deployment of zero-emissions technologies such as battery electric or hydrogen locomotives is substantial. LCLFs, on the other hand, offer a drop-in opportunity to significantly reduce emissions from diesel locomotives in the immediate term, while simultaneously maximising use of available assets still within their lifespan.

Despite the opportunities presented by LCLF adoption, pricing and availability of these fuels remains a significant barrier for the rail industry. The ARA supports DITRDCSA's objectives of securing a viable, domestic supply of LCLF for use by Australian industries.

ABOUT THE ARA

The ARA is the peak body for the rail sector in Australia and New Zealand, and advocates for more than 230 member organisations across the industry.

Our membership covers every aspect of the rail industry, including the:

- passenger and freight operators that keep essential rail services moving;
- track owners, managers, and contractors that deliver a safe and efficient rail infrastructure network; and
- suppliers, manufacturers, and consultants that drive innovation, productivity, and efficiency in the rail industry.

Our members are driven to support vibrant, sustainable and connected communities through greater use of rail across Australia and New Zealand. We bring together industry and government to help achieve this ambition.

Our advocacy is informed by an extensive research program to ensure we offer solutions that are grounded in evidence and focused on delivering tangible value in our daily lives.

We believe the rail industry has a crucial role to play in Australia's journey towards net zero, and we know that the industry offers meaningful and rewarding careers for thousands of people in both cities and regional areas.

Our significant program of work is focused on supporting a strong advocacy agenda, and creating opportunities for the rail industry to network, collaborate and share information, and maximise the benefits we have to offer the wider community.

RAIL AND THE NET ZERO OPPORTUNITY

The rail industry will be key to the net zero transition as an energy efficient, low emissions transport mode.

The Federal Government's *Transport and Infrastructure Net Zero Roadmap and Action Plan* confirmed that the transport sector is the third largest source of Australia's greenhouse gas emissions and, if no action is taken, will be Australia's largest source of emissions by 2030. This highlights the need to support measures that deliver emissions reductions and maximise the use of sustainable transport modes.

The ARA's *Value of Rail 2025* found rail freight generates 16 times less carbon pollution than road, while passenger rail generates 40 per cent less carbon pollution than road. Mode shift from road to rail therefore offers an immediate and near-term solution for reducing emissions intensity across the transport sector as a whole, for both passenger and freight transport.

The rail industry is committed to continuing to build on these significant sustainability benefits to support the broader transport sector's efforts to decarbonise. It is proactively pursuing a range of strategies to support the sector's net zero future, including:

- Facilitating greater use of sustainable transport modes such as rail to achieve short-term emissions reductions using existing technologies
- Achieving energy efficiencies using existing technologies to reduce emissions
- Transitioning to renewable energy sources for metropolitan passenger rail
- Transitioning regional passenger, freight and heavy haul operations from diesel-powered rollingstock to new technologies such as:
    - Hybrid solutions, for example bi-mode rollingstock to reduce emissions by retrofitting existing technologies
    - The adoption of low carbon liquid fuels such as renewable diesel
    - The adoption of new solutions such as battery electric and hydrogen technologies when rollingstock is due to be replaced.

The ARA's report, *The critical path to decarbonising Australia's rail rollingstock*, found that about half of the country's diesel-powered rollingstock will be due for replacement in the next eight to 13 years. Research and trials are currently underway to prove new technologies within the Australian context to support this effort. However, rail industry organisations will face significant costs to move to new technologies.

The critical path report identified LCLFs, such as biodiesel and synthetic diesel, as offering a key transitional solution for decarbonisation in the short-to-medium term, as the industry works to develop, trial and implement other technologies such as battery electric and hydrogen powered rollingstock. Two recommendations stemming from this research included recommendation that both state and federal governments:

- Support industry to accelerate the commercial feasibility and support supply chains for low carbon fuels to address short-term decarbonisation effort

- Work to secure supporting low carbon and renewable fuel supply, e.g. biofuels, renewable diesel

The ARA appreciates that the Cleaner Fuels Program is working to secure a strong domestic pipeline of LCLFs across the transport industry, which is in support of the above recommendations.

FUEL PRIORITISATION

The ARA supports the prioritisation of renewable diesel above sustainable aviation fuel (SAF). As outlined above, increased supply and distribution of LCLFs will be crucial to the rail industry as it works to decarbonise in support of Australia's net zero future.

The aviation industry is significantly advanced in this area already, with $14.1 million in funding from the Australian Renewable Energy Agency (ARENA) earmarked last year for SAF projects, and the establishment of the Jet Zero Council to drive investment and production. Renewable diesel, on the other hand, has not yet been allocated specific project funding under ARENA. Additional prioritisation of SAFs would only widen this imbalance between transport sectors.

The majority of Australia's freight task is moved by rail, which offers a scale and efficiency unmatched by other transport modes. However, the sheer distances involved in freight transport in Australia mean that more traditional transport decarbonisation methods, such as electrification, are unfeasible. A reliable domestic supply of LCLF will therefore be essential for the decarbonisation of the freight sector.

CURRENT CHALLENGES FOR RAIL INDUSTRY LCLF USERS

There are two key constraints primarily limiting the uptake of LCLFs by the rail industry: pricing and surety of supply.

The cost of renewable diesel in Australia can be two to four times the price of conventional diesel, and in some circumstances even higher. Further, there are currently no incentivisation mechanisms, such as carbon credits, available for rail industry LCLF users to offset some of this price differential. Given the tight price competitiveness between rail and other transport modes, this makes wider uptake of LCLFs generally cost prohibitive.

Supply certainty is also an issue, with rail competing with other modes for a limited volume of LCLFs available. Domestic purchase of renewable diesel is highly limited, and supporting supply infrastructure is generally lacking. Importation of LCLFs from overseas is expensive, as outlined above, and subject to the inherent risks associated with international supply chains. The need to import fuels also raises concerns for their sustainability credibility, once emissions from the entire life cycle of the fuels, including processing and transport, are considered. Uncertainty around the availability of LCLF creates hesitation among potential users, whose risk tolerance does not align with unpredictable supply conditions.

The objectives under the Cleaner Fuels Program seek to address both of these constraints by establishing reliable domestic production of LCLFs within Australia. The ARA supports this initiative and further encourages consideration of a dedicated LCLF supply for rail industry users, to maintain and uplift rail's position as Australia's most sustainable transport mode.