

Emissions and Clean Energy Transition

July 2022



Transport is Australia’s third largest source of greenhouse gas emissions at 17 per cent with approximately 20 per cent of this being attributed to freight activities.ⁱ

The freight and supply chain sector is already on a path to emissions reduction with many ALC members committed to net zero targets by 2040 (some by 2030). This is influenced by a range of factors including access to the right technology, industry incentives, customer expectations, regulatory settings and investor sentiment as well as global capital markets.

Some of the changes we are seeing include:

1. Vehicle technology
 - a. Better fuel efficiency - aerodynamics / tyres / load weight
 - b. Higher Productivity Vehicles – B-doubles and B-triples
 - c. Looking at alternative fuels - biodiesel blends, EVs, hydrogen
2. Driver training (e.g., keep within ideal engine RPM and minimise vehicle idling, braking and gear changes)
3. Using digital technology and data to better plan routes and timing of movements
4. Companies purchasing renewable electricity supplied through the grid or looking at on-site alternatives.

Given the nature of Australia’s heavy vehicle fleet, the availability of second-hand low or zero emission vehicles in the marketplace (similar to passenger / private vehicles) will help to facilitate increased and more affordable access for non-fleet businesses helping to facilitate a smoother transition, but this will take time.

The freight and supply chain sector faces a number of challenges in reducing emissions but if Australia is to meet its emission reduction targets, it is an obvious focus for action.

The degree of difficulty in decarbonising transport varies across the sector. For example, with road transport, electrification is relatively straight-forward for smaller vehicles. Longer distances and heavy loads bring additional challenges especially the weight of the battery and the high-power needs for fast charging.

We’re seeing successful transitions to alternative fuels in other modes of freight including:

- ANL announced in April 2022, the success of the first biofuel trial on a containerised shipping vessel within Oceaniaⁱⁱ
- In December 2021, BP and Maersk Tankers, with support from the Danish Maritime Authority, announced they successfully completed trials using biofuel-blended marine fuel in product tankers, demonstrating that sustainable biofuels can be used as a marine ‘drop-in fuel’ to help reduce carbon emissions in shippingⁱⁱⁱ
- In 2021, Aurizon and Anglo American announced a feasibility study to assess the introduction of hydrogen-powered trains for bulk freight^{iv}

It is important therefore to ensure that industry and governments explore a range of low-emission technologies and regulatory / policy mechanisms to help support the transition.

The Australian Government acknowledges hydrogen is important for the decarbonisation for heavy transport and committed to working with the States and

Territories to roll out Hydrogen Highways nationally. The Government has agreed to match funding made by jurisdictions up to \$60 million. This investment could see 16 hydrogen refuelling stations established on Australia's busiest freight routes on the eastern seaboard.^v

This is an important step in decarbonising the freight sector and to ensure these projects adequately cater for multiple modes of freight it is imperative governments partner with industry.

Recommendations:

1. Additional funding be provided to ARENA and the CEFC to build on their existing body of work and help drive the transition to low emission vehicles in the freight and logistics sector with a focus on:
 - a. Demonstrating the benefits of hydrogen, and other low emission fuels, in reducing heavy transport emissions to encourage interest by small-medium sized operators, through targeted education campaigns
 - b. Testing and trialling zero emissions vehicles for the freight and logistics sector for use in Australian conditions
 - c. Expanding current programs to develop refuelling infrastructure on major freight routes linked to current low emission technologies such as hydrogen
 - d. Supporting the transition to clean energy and on-site recharging facilities in freight and logistics facilities such as warehouses and distribution centres.
2. Through the National Freight & Supply chain Strategy, ensure dialogue and coordination between States / Territories regarding investment and roll-out of emissions reduction infrastructure such as hydrogen re-fuelling stations on major freight routes
3. Consider regulatory settings and incentives (either directly or through the taxation system) to help support enterprise-level decision making and action
4. Encouraging modal shift through completion of the Inland Rail and focus on multi-modal freight terminals to reduce congestion and improve planning route planning and drive efficiencies in the consolidation and distribution of freight
5. Australia should adopt Euro 6 standards to accelerate emissions reduction, this should coincide with a transition plan for vehicles that do not meet these standards.

ⁱ <https://climateanalytics.org/media/australiacimatefactsheets2019-transportsector-climateanalytics.pdf>

ⁱⁱ <https://www.shippingaustralia.com.au/anl-announces-that-it-has-successfully-completed-a-biofuel-powered-voyage-in-oceania/>

ⁱⁱⁱ <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-and-maersk-tankers-carry-out-successful-marine-biofuel-trials.html>

^{iv} <https://www.aurizon.com.au/news/2021/aurizon-and-anglo-american-look-to-hydrogen-powered-trains-in-queensland>

^v <https://www.alp.org.au/policies/driving-the-nation>