

- *We've heard plenty about EVs and a little bit about hydrogen but nothing about low-carbon liquid fuels. Can you get us up to speed on low-carbon liquid fuels and where they are being used around here? ... There are a few different ones. I won't break down each of them. I can always do that on notice later.*

Relevant LCLF's for the transport industry include synthetic fuels, which are sometimes called 'renewable' diesel. They are produced from a variety of renewable sources, known as 'feedstocks', which include canola seed, and animal tallow. These synthetic fuels differ from earlier types of renewable fuels, often referred to as 'biodiesel', made from vegetable oils and ethanol. The crucial difference between renewable diesel and biodiesel, is that renewable diesel is a 'drop-in' fuel at any blend percentage with conventional diesel up to 100%, meaning that it is completely compatible with existing vehicle hardware and fuel transport and delivery infrastructure.

Renewable diesel may be twice the cost of conventional diesel. Availability and cost will be the two key factors in the take-up of LCLF in the freight transport sector. HVIA does not expect that transport operators will deviate from planned routes solely to access renewable diesel, and they are similarly unlikely to opt for a more expensive fuel when cheaper alternatives are adjacent. The ability of government to address those two factors will ultimately determine the level of success that renewable diesel can achieve in contributing to Australia's decarbonisation targets.

HVIA strongly supports policy to encourage the development of local LCLF feedstock production and refining industries, noting CSIRO findings that highlight Australia's natural geographic and other existing advantages. In that context, it would be a considerable missed opportunity if Australia were to remain a limited LCLF feedstock producer and exporter, only to continue to import both conventional fuels and LCLFs in the future.

The Clean Energy Finance Corporation (CEFC) recently released a report which may of interest to the committee: [Refined Ambitions – how Australia can become a low carbon liquid fuel powerhouse - Clean Energy Finance Corporation](#)

- *To switch to training, do we know how many RTOs are currently equipped to deliver either training for battery electric or hydrogen?*

All relevant courses have different forms of funding. In most states AUR32721 isn't recognised as an apprenticeship which affects funding.

RTO totals from Training.gov

[AUR32721](#) Certificate III in Automotive Electric Vehicle Technology - **20**

[AURSS00064](#) Battery Electric Vehicle Inspection and Servicing Skill Set - **40**

Regarding hydrogen, there is nothing in the AUR delivered nationally. In other training packages there are and the relevant Jobs and Skills Council, AUSMASA is currently working on a hydrogen skill set. HVIA would recommend the committee reach out to AUSMASA for more information.

- *It has been noted a few times that with the actual weights and additional weights on the vehicles and all that sort of stuff, this is problematic for the roads. Should there be strategic routes that are EV permissible or at least recommended? Is that a good idea to go down? Should there be some kind of regulatory reform when it comes to certainly electric vehicles and even hydrogen, in terms of where they can go?*

The LZEHV uptake will be profoundly hindered if they continue to be limited in access. Industry uptake will stagnate if they are restricted to a set number of routes, and as such, must urgently be given 'general access' like the current fleet of combustion engine vehicles, to enable the net zero transition to continue. HVIA's understanding is that the increased loads imposed on road surfaces from LZEHV's is a maintenance concern that may reduce design lifespans by a marginal amount, which will be negligible in many cases, but will depend on a range of factors such as vehicle weight, traffic mix, and road design/construction. To date, no road manager at any level (federal, state, local) has provided HVIA with modelling that supports the need to restrict LZEHV's from operating on any routes.

- *The last set of witnesses put a figure of \$600 million onto upgrading roads for electric vehicles and the extra weight, which I know sounds like a lot of money but, from a government point of view, actually doesn't sound like a lot of money for road upgrading. There are two ways you go on this. It's a 40-tonne limit, whereas if it's an electric vehicle, you allow a 42-tonne limit, and that gets you your two-tonne for the battery charge on certain roads. Obviously, that doesn't work on some bridges, particularly bridges in more remote and rural communities. Have you looked at an actual costing on what the road upgrade would need to be for the difference between 40 and 42 tonnes?*

Road and infrastructure lifespan and the impacts of increased axle masses can be modelled using widely-accepted formula and assessment tools. HVIA, as an industry association, does not have the expertise to conduct such analysis, and to-date, has not commissioned any. Given the expected marginal impacts to road and infrastructure maintenance from LZEHV's, HVIA expects that the cost for any upgrades would be

comparatively small, and able to be spread across many decades, in-line with the long lifespans of roads and bridges. To date, no road manager at any level (federal, state, local) has provided HVIA with calculations showing that specific bridges require urgent upgrades in order to safely carry LZEHV traffic. A higher axle load allowance for LZEHV's would likely ameliorate road manager concerns, but allow the net zero transition to continue. Any additional allowances must be permanent, to provide industry with certainty needed for investment decisions.

- *{ \$100 million into fixing regional roads across Queensland } That's for regional roads in Queensland on major transport routes, not regional roads across Queensland?*

\$100 million over 4 years for Country Roads Connect, to provide greater road connectivity for rural and regional Queenslanders to improve resilience and safety in regional communities by sealing unsealed regional roads (source: [Budget 2025-26 SDS DTMR](#)).

- *Could we get you to table some information about that California scheme or some of the other ones?*

Please see the below media release from the California Air Resources Board which contains details of their scheme

### **1 in 6 new trucks, buses, and vans in California are zero-emission**

*Published June 6, 2024 by the California Air Resources Board*

“The sales of new zero-emission medium- and heavy-duty trucks in California in 2023 have [doubled from the prior year](#), now representing 1 out of every 6 new vehicles sold for services that include last-mile delivery, freight transportation, and school buses, according to a [report](#) released by the state today.

With 18,473 medium- and heavy-duty ZEVs sold in California in 2023, the state has exceeded its Advanced Clean Trucks (ACT) goal two years ahead of schedule and selling five times the required amount. Since 2021, a total of 26,921 medium- and heavy-duty ZEVs have been sold in California.

...

*How we got here*

Advanced Clean Trucks requires manufacturers of medium- and heavy-duty vehicles to phase-in the sale of zero-emission options in California as an increasing percentage of sales.

A similar rule has been adopted by 10 other states, including New York, New Jersey, New Mexico, Massachusetts, Washington, Oregon, Vermont, Colorado, Rhode Island and Maryland. Together, these 11 states represent over 25% of new heavy-duty vehicle registrations annually in the nation.

The Advanced Clean Fleets regulation includes a first-of-its kind requirement for all medium- and heavy-duty vehicles sold into California fleets to be zero-emissions beginning in 2036 and is expected to introduce 1,690,000 ZEVs into the California fleets by 2050.

To ensure that the needed technology will be available to meet upcoming milestones, CARB and the nation's leading truck and engine companies signed the Clean Truck Partnership in July 2023, which commits participating manufacturers to meeting California's vehicle standards, regardless of whether any other entity challenges California's authority to set more stringent emissions standards under the federal Clean Air Act. In turn, CARB has agreed to work collaboratively with manufacturers to provide more flexibility in meeting CARB's requirements."

[1 in 6 new trucks, buses, and vans in California are zero-emission | California Air Resources Board](#)

Here is a link to the incentives programs that exist in California: [Incentives | California Air Resources Board](#). The most relevant is the *Clean Truck and Bus Vouchers*. Vouchers range from \$7,500 up to \$400,000 per truck: [Clean Truck and Bus Vouchers \(HVIP\) | California Air Resources Board](#).

## Europe

One example of an incentive program in Europe is in The Netherlands, which provides incentives for the development of private and public charging of heavy vehicles, and for energy-efficient techniques that are built into electric trucks (e.g. regenerative braking) via the Energy Investment Allowance (EIA), a scheme that encourages businesses to invest in energy-saving and sustainable energy technologies. Under the scheme, eligible businesses can deduct a portion of their investment costs for energy-saving assets from their taxable income.

[Subsidieregeling Publieke Laadinfrastructuur zwaar vervoer \(SPULA\) | RVO.nl](#)

[Energie Investeringsaftrek \(EIA\)](#)

HVIA is happy to provide further briefings to committee members.