

ALC ELECTRIC VEHICLES WORKING GROUP

Transport and Public Works Committee

Inquiry into Transport Technology

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Members of the ALC Electric Vehicles Working Group



About the Australian Logistics Council

The Australian Logistics Council (**ALC**) is pleased to make this submission to Transport and Public Works Committee Inquiry into Transport Technology.

In particular, ALC provides this submission to comment on the readiness of the transport network to accommodate increasing numbers of electric vehicles in coming years.

By way of background, ALC is the peak national body representing the major and national companies participating in the freight logistics industry. We have a focus on national supply chain efficiency and safety.

ALC members include Linfox, Coles, Woolworths, Australia Post and DHL – companies that share a commitment to decreasing the carbon footprint of the logistics industry. These companies, plus many others, have recently formed the **ALC Electric Vehicles Working Group**. This Working Group has been created to inform the national discussion around the benefits of electric freight vehicles.

While governments typically focus on the uptake of private electric vehicles, it is inevitable that electric vehicles will play a significant role in Australia's future freight operations. **All governments must therefore be cognisant of the fact that electric freight vehicles are operating in Australia.**

Given our experience in the freight logistics industry, ALC believes that this submission provides a unique perspective. A point we like to emphasise is that the freight logistics industry has a relatively inelastic demand for road transport – and so freight operators are vital to reducing Australia's transport emissions.

This submission will:

1. Outline the reasons why we believe the Australian freight industry will seek to further invest in electric vehicles
2. Provide case studies of how logistics providers are already beginning to invest in electric vehicles; and
3. Provide recommendations as to how ALC believes the Queensland Government can improve the readiness of the transport network in order to cope with the expected increase in electric vehicles over the coming years.

ALC Electric Vehicles Working Group

In June 2018, the ALC Board agreed to form the ALC Electric Vehicles Working Group.

Membership of the Working Group is open to ALC members and interested parties who share the aims of:

1. Collaborating with government and industry to promote the financial, social and environmental benefits of electric vehicles.
2. Working with government to increase the manufacture and production of electric vehicles.
3. Establishing targets for emissions reductions and the number of electric vehicles in fleet.
4. Positioning the logistics industry as a leading sector in the drive for enhanced environmental outcomes by demonstrating positive correlations between reduced environmental impacts, operational efficiency and business profitability.
5. Engaging with government to explore ways to incentivise electric vehicle use.
6. Provide case studies to improve the social licence of the logistics industry;
7. Disseminating information to the logistics industry about the benefits of electric vehicles.

The Electrification of Freight

Electric vehicles are an alternative to vehicles powered by internal combustion engines. Their research and development is closely linked with the desire to reduce greenhouse gases and particulate emissions to mitigate the effects of climate change and pollution.

The current and potential effects of climate change and particulate emissions – including temperature rises, sea level rises and air pollution – are causing logistics operators to identify ways to reduce their carbon footprints.¹ Logistics consumers and investors are also conscious of these effects and are encouraging logistics operators to improve their environmental performance.

Members of the ALC Electric Vehicles Working Group recognise that environmental and social considerations will increase the uptake of electric vehicles in Australia.

However, there are a number of other considerations which will encourage freight operators to invest in electric vehicles. For example, electric vehicles are quieter than conventional internal combustion engines, and so reduce noise pollution.² This is important for supermarket operators, such as Woolworths, who are often not able to deliver produce to their stores at night due to curfews enforced by local governments.

It is also acknowledged that electric vehicles avoid Fuel Excise Tax – which is currently levied at \$0.409/litre.³ While capital costs for electric vehicles are higher than for petrol/diesel vehicles, it is also often cheaper to maintain and operate an electric vehicle. The ALC Electric Vehicles Working Group believes that, in the long-run, it is cheaper to purchase an electric vehicle.

Finally, it must be noted that electric vehicles produce fewer particulates than internal combustion engines, and so can lead to improved air quality. While Australia's major metropolitan areas usually experience good air quality, at least by global standards, it should be noted that it is becoming evident that there is no longer a safe level of pollutant concentrations⁴.

¹ See <https://climate.nasa.gov/effects/>

² Tom Gotsis, *Electric Vehicles in NSW* (2018), p 4.

³ See <https://www.ato.gov.au/business/excise-and-excise-equivalent-goods/fuel-excise/excise-rates-for-fuel/>

⁴ Tom Gotsis, *Electric Vehicles in NSW* (2018), p 3.

Electric Vehicles in Australia – Case Studies

By international standards, Australia has had a sluggish uptake of electric vehicles. In 2016, just 0.1% of new vehicles sold in Australia were electric vehicles.⁵ This is in contrast to a global market share of 1.1%.⁶

This is not surprising given the greater distances travelled in Australia and the lack of electric vehicle manufacturers.

However, Australian logistics providers are beginning to see the advantages of electric vehicles. The following section outlines how some of Australia's largest logistics providers – including DHL, Australia Post and Linfox, are incorporating electric vehicles into their delivery models.

DHL Australia

In 2008 DHL became the first global logistics service provider with a quantified carbon dioxide efficiency target with the launch of the *GoGreen* program.⁷

DHL set a target to improve its carbon efficiency by 30% by 2020. In 2016, and four years earlier than expected, DHL achieved that target.

DHL now has now launched *Mission 2050* – DHL's global target of zero carbon emissions by 2050.

To achieve this target, DHL is aiming to deliver 70% of its first and last mile services with clean pick-up and delivery solutions by 2025. DHL is currently using two electric vehicles – the **Renault Kangoo ZE (zero emissions) Van** – to pick-up and deliver parcels in Melbourne and Sydney. In 2019-2020 DHL plans to extend its electric vehicle fleet using different vehicle manufacturers and expanding their use throughout Australia.

As an example, DHL will shortly begin to use the **DHL Cubicycle** for freight deliveries in Australia.



DHL Cubicycle

The DHL Cubicycle weighs 59kg and has a cargo weight capacity of 150kg.

DHL is now looking to roll-out the Cubicycle for deliveries in CBD areas, pending relevant permissions.

⁵ Tom Gotsis, *Electric Vehicles in NSW* (2018), p 1.

⁶ Tom Gotsis, *Electric Vehicles in NSW* (2018), p 1.

⁷ See <https://www.dpdhl.com/en/responsibility/environment-and-solutions.html>

DHL is also now planning to investigate the manufacture of electric vehicles in Australia. These electric vehicles could be similar to the **StreetScooter** currently manufactured by DHL in Germany.



DHL StreetScooter manufactured in Germany

Australia Post

In 2010, Australia Post set a target to reduce its Scope 1 and 2 carbon emissions by 25% by 2020 (with a year 2000 baseline). Through a focus on the electricity to power their buildings and transport operations, they are on track to achieve this target, seeing a reduction in total emissions of over 20%.

This result is notable given the Australia Post network continues to grow, with domestically delivered parcels up 15.9% in 2017.

Australia Post e-vehicles

In March 2017, a program was run in Hobart trialling five, **three-wheel Electric Delivery Vehicles**. The electric delivery vehicle (**e-vehicle**) has a capacity of up to 100 small parcels and 1,200 letters – almost three times the capacity of a traditional motorcycle. It is therefore well-suited to addressing the challenges imposed by increasing parcel delivery demands, fuelled by online shopping and e-commerce. The e-vehicle has a run-time of approximately nine hours – a full day's work.



As a further benefit, the e-vehicles have also proven much safer than older motorcycles.

Australia Post is now rolling-out 150 e-vehicles in New South Wales. A national roll-out of 1,000 e-vehicles is also being planned.

Australia Post is also using the Renault Kangoo ZE Van for larger deliveries.



Australia Post Renault Kangoo ZE Van

For larger deliveries, Australia Post has also trialled the **Renault Kangoo ZE van**.

Four Renault Kangoo ZE vans were trialled over three years in the Melbourne and Sydney CBD's. Pleasingly, this trial has shown both carbon and energy savings, which have helped to reduce operational costs.

Australia Post has also installed solar panels capable of producing 2.1 megawatts of energy at its Sydney Parcel Facility. At the time of installation, in November 2017, it was Australia's largest commercial solar system on an industrial roof.

In its first year of operation, this installation will reduce greenhouse gas emissions by 2,260 tonnes and provide \$800,000 in savings.



Linfox Logistics

Linfox Logistics is Asia-Pacific's largest privately owned logistics company with more than 24,000 employees across 12 countries.

In an article from *The Australian Financial Review*, published on 29 January 2018, Linfox Chairman Peter Fox AM indicated his desire to see Linfox be "the first mover" on electric trucks.⁸

'We will be the first mover' on electric trucks, says Linfox chairman Peter Fox



As a leader in the logistics industry, Linfox is looking to progress the number of electric vehicles in their fleet. This includes:

- Trialling electric vehicles at their purpose built facilities.
- Investing in renewable energy solutions to power electric vehicles in the future. This includes 500kW of solar panels installed at their warehouses to date, with plans to increase this energy generation across Australia; and
- Implementing electric vehicle material handling equipment at their sites and building electric vehicle requirements into their new sites.

⁸ See <https://www.afr.com/business/we-will-be-the-first-mover-on-electric-trucks-says-linfox-chairman-peter-fox-20180124-honppl>

Uptake of Electric Vehicles for Commercial Purposes

The ALC Electric Vehicles Working Group held its inaugural meeting in Sydney on Wednesday 25 July 2018.

During this meeting, all participants gave their support to increasing the use of electric vehicles for freight deliveries.

Australian Governments should note the enthusiasm of the freight logistics industry to adopt electric vehicles as part of their businesses.

Companies are already factoring in an uptake of electric vehicles on their operations. For example, Qube Logistics is installing electric vehicle charging stations at its Moorebank Intermodal Terminal, now under construction.

In the short-term, freight operators believe that high volume; short distance freight would be the first to benefit from electric vehicles. It is envisaged that residents living in larger metropolitan areas, who purchase consumer goods online, may be the first to receive their orders from electric vehicles.

Recommendations

ALC makes the following recommendations in order to improve the readiness of the transport network in order to cope with the expected increase in electric vehicles over the coming years.

1. The Queensland Government seek to provide low interest finance to companies in order to install electric vehicle charging stations.

Two thirds of motorists indicate that a lack of adequate charging infrastructure is the greatest barrier to purchasing an electric vehicle.⁹ This “range anxiety” will need to be addressed in order to significantly increase the number of electric vehicles in Australia’s logistics fleet.

As an example, in June 2017 there were just two charging stations in the Northern Territory – and just 476 charging stations across Australia. When compared to an estimated 6,400 petrol stations in Australia, that’s 1 charging station for every 13.4 petrol stations.

Put simply, there is insufficient charging infrastructure in Australia to facilitate any widespread change in electric vehicle use in logistics – particularly outside major metropolitan areas.

ALC does however acknowledge and support the work the Queensland Government is doing to develop the Queensland Electric Super Highway. We see this Highway as a promising first step.

Further policies the Queensland Government could seek to implement could involve providing incentives for freight operators to install charging equipment at their distribution centres and warehouse facilities. These incentives could include, for example, a low interest loan and rebates on electricity used to power the vehicle.

2. The Queensland Government work to develop City Deals with the Commonwealth Government that further develop charging infrastructure and encourage planning regimes favourable to electric vehicle use.

ALC believes that the Commonwealth Government City Deals can be used to encourage fund recipients to plan for the future use of electric freight vehicles, notably with regard to recharging infrastructure. City Deals may also be used to incentivise the provision of electric vehicle only loading facilities in metropolitan areas, allow electric vehicles to utilise bus lanes and/or transit lanes and to establish adequate recycling facilities for used electric vehicle batteries.

3. The Queensland Government actively fund electric freight vehicle trials.

To achieve this, the Queensland Government could look to engage with the Commonwealth Government’s *Smart Cities and Suburbs Program*. For example, this program has previously provided \$5 million to the *Smart Move Newcastle Project*.¹⁰ Amongst other things, this project will pilot an electric vehicle hub on the outskirts of Newcastle. As part of this hub, electric vehicle chargers will be provided.

⁹ *Recharging the Economy*, Electric Vehicle Council (2018) p 4.

¹⁰ See <http://newcastle.nsw.gov.au/Council/News/Latest-News/City-welcomes-smart-city-funding>

4. The Queensland Government consider changes to the *Australian Design Rules*, to accommodate the unique size and shape of light commercial electric vehicles.

The *Australian Design Rules* are intended to provide a set of national standards for vehicle safety in Australia.¹¹

While the *Australian Design Rules* play a vital role in ensuring vehicle safety, ALC members have found it difficult to ensure their electric vehicles conform to their requirements.

The Queensland Government should support a review of the *Australian Design Rules*, noting the unique size and shape of light commercial electric vehicles.

5. All Australian governments work collaboratively to ensure a consistent and reliable source of energy to power electric vehicles.

As part of the National Energy Market, the Queensland Government must work collaboratively to provide a reliable, secure and affordable source of electricity. In our submission to the Senate Select Committee on Electric Vehicles, ALC stated:

One factor that may limit the uptake of electric vehicles in the freight logistics industry is a lack of confidence by industry in having a guaranteed and reliable source of electricity.

From September 2016 to February 2017, South Australia experienced three large black-outs. Load shedding by the Australian Energy Market Operator (AEMO) over the 2016-17 Australian summer also forced temporary black-outs.

Freight and logistics companies wish to invest in electric vehicles. However, companies will only do so if they have confidence that they have access to a reliable and affordable source of electricity.

¹¹ See <https://infrastructure.gov.au/vehicles/design/>

Conclusion

ALC believes the Queensland Government can play a leading role supporting logistics companies seeking to increase the number of electric vehicles in their fleet, and thereby deliver environmental benefits for the wider community.

The ALC Electric Vehicles Working Group would welcome any opportunity to further engage the Queensland Government in this important area..

If you have any questions or queries about this submission, please contact Lachlan Benson, ALC Interim CEO at [REDACTED]

Australian Logistics Council Electric Vehicles Working Group
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