ALC ELECTRIC VEHICLES
WORKING GROUP

Transport for NSW
Electric and Hybrid Vehicle Plan

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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 for NSW as the *Electric and Hybrid Vehicle Plan* (**the Plan**) is developed.

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 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.

ALC Electric Vehicles Working Group

In June 2018, the ALC Board agreed to the 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 Benefits of Electric Vehicles

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.

Electric vehicles offer an effective and visible way for logistics operators to reduce greenhouse gas emissions. Studies have found that an electric vehicle using electricity generated from a coal fired power plant is only using two-thirds of the energy a petrol/diesel vehicle would use to travel the same distance.[2]

Of course, greenhouse gas and particulate emissions are further decreased when electric vehicles are fuelled by renewable energy.

In 2017 renewables generated 16.94% of Australia's total energy generation. Furthermore, more than 700 MW of renewable energy products were completed and began generation in 2017.[3] The Commonwealth Government currently has a Renewable Energy Target (**RET**) of 23.5% of total electricity generation by 2020.[4] The Australian Capital Territory (**ACT**) Government currently has the highest legislated RET – at 100% by 2020.

Outside environmental considerations, electric vehicles are also quieter than conventional internal combustion engines, and so reduce noise pollution.[5] This is important for supermarket operators, such as Woolworths, who are often not able 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.[6] 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 concentrations[7].

[1] See https://climate.nasa.gov/effects/
[2] See https://www.theguardian.com/football/ng-interactive/2017/dec/25/how-green-are-electric-cars
[3] See https://www.cleanenergycouncil.org.au/policy-advocacy/reports/clean-energy-australia-report.html
[4] See http://www.environment.gov.au/climate-change/government/renewable-energy-target-scheme
[5] Tom Gotsis, *Electric Vehicles in NSW* (2018), p 4.
[6] See https://www.ato.gov.au/business/excise-and-excise-equivalent-goods/fuel-excise/excise-rates-for-fuel/
[7] Tom Gotsis, *Electric Vehicles in NSW* (2018), p 3.

It is clear from this analysis that:

1. Internal combustion engines produce greenhouse gases and other particulates which contribute to climate change and pollution.

2. Logistics operators, investors and customers are looking for ways to reduce their greenhouse gas emissions to mitigate the effects of climate change and air pollution.

3. Electric vehicles provide an effective and visible way for logistics operators to reduce their emissions of greenhouse gases and other particulates. These emissions are further reduced by using renewable energy to power electric vehicles.

4. Outside of environmental benefits, electric vehicles:

    - are quieter, and could be a game changer for supermarket operators who are currently restricted from accessing some stores with heavy vehicles at night due to curfews; and

    - have a cheaper lifecycle cost than a petrol/diesel vehicle.

Electric Vehicles in Australia

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.[8] This is in contrast to a global market share of 1.1%.[9]

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

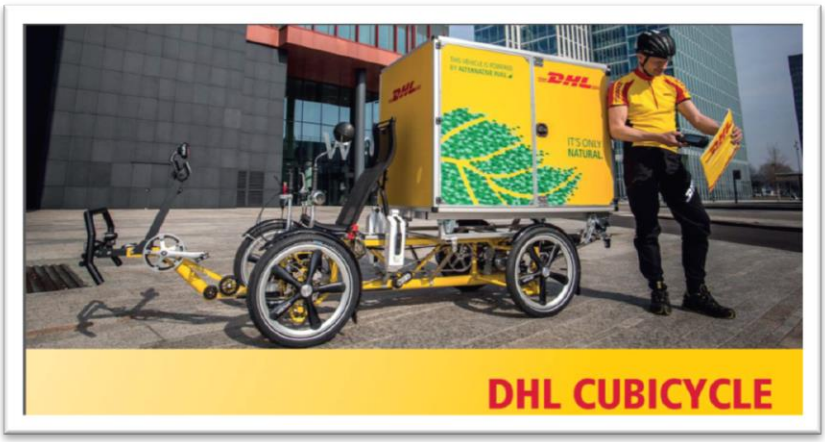
In 2008 DHL became the first global logistics service provider with a quantified carbon dioxide efficiency target with the launch of the *GoGreen* program.[10]

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.



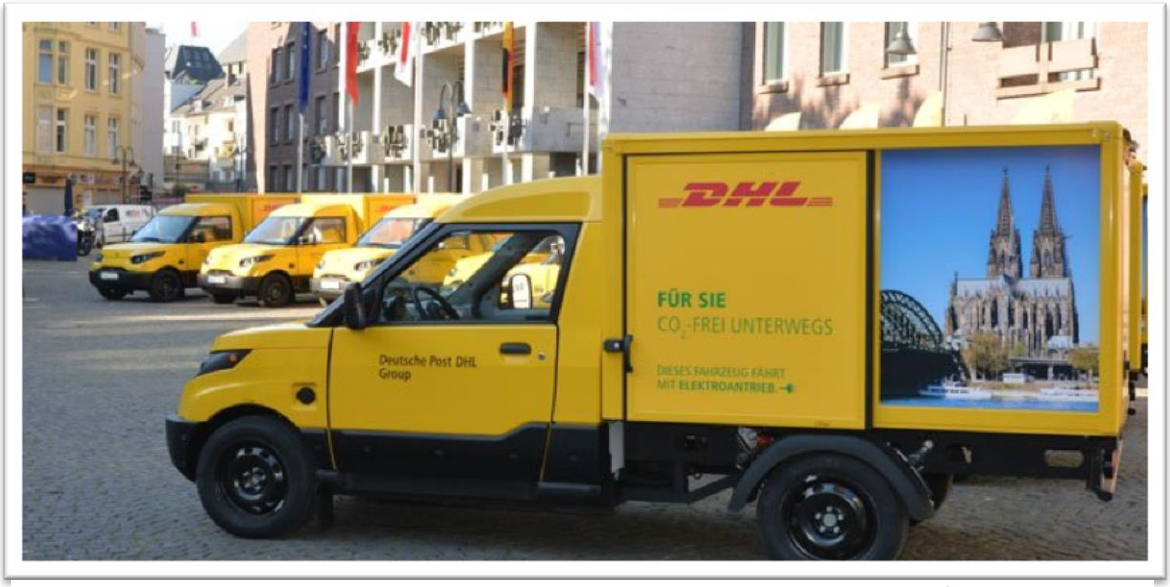
DHL Cubicycle

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.

[8] Tom Gotsis, *Electric Vehicles in NSW* (2018), p 1.
[9] Tom Gotsis, *Electric Vehicles in NSW* (2018), p 1.
[10] 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

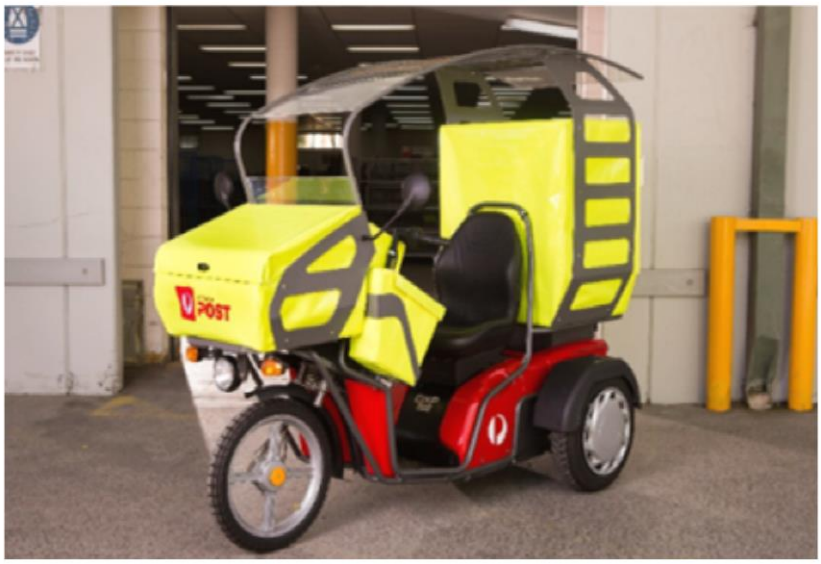
Australia Post

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.

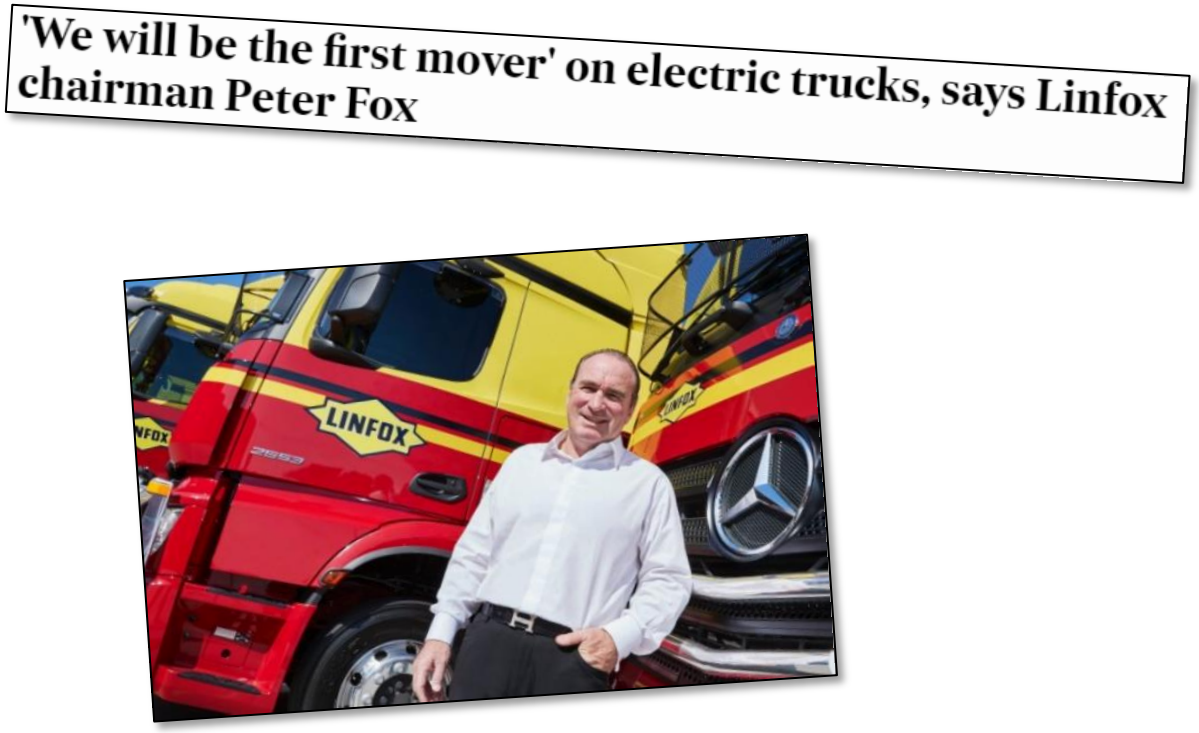
Australia Post has also installed solar panels capable of producing 2.1 megawatts of energy at its Sydney Parcel Facility. At the time of installation, in November 2017, it was Australia's largest commercial solar system on an industrial roof.

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.[11]


'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.

[11] 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.

Senate Select Committee on Electric Vehicles

In August the ALC Electric Vehicles Working Group provided a submission to the Senate Select Committee on Electric Vehicles. A list of recommendations contained in that submission is provided below. Please note the recommendations **highlighted** indicate recommendations that require the Commonwealth and New South Wales Governments to work together.

1. **The Commonwealth take a national leadership role and seek to influence national consistency in electric vehicle registration schemes. This includes ensuring that heavy vehicles (as defined by the *Heavy Vehicle National Law*) are included in any registration system which incentivises the uptake of electric vehicles.**

2. The Commonwealth further expand its Green Vehicle Guide (greenvehicleguide.gov.au) to include heavy vehicles (as defined by the *Heavy Vehicle National Law*).

3. **The Commonwealth further expand its Green Vehicle Guide to identify and highlight State and Territory electric vehicle registration incentives.**

4. The Commonwealth Government utilise the Clean Energy Finance Corporation to provide low interest finance to companies in order to install electric vehicle charging stations.

5. **The Commonwealth Government leverage City Deals to further develop charging infrastructure and encourage planning regimes favourable to electric vehicle use.**

6. **The Commonwealth Government continue the *Smart Cities and Suburbs Program* and actively look to fund electric freight vehicle trials under this program in the future.**

7. **The Commonwealth ensure that any plan developed to increase the use of electric vehicles in Australia is consistent and enhances existing State/Territory and Local Government based electric vehicle policies.**

8. The Commonwealth ensure that all aspects of the electric vehicle chain – from manufacture to maintenance – are capable of obtaining funding through the Clean Energy Finance Corporation.

9. **The Commonwealth waive the $25 fee issued for a National Heavy Vehicle Plate when the vehicle registered is an electric vehicle.**

10. The Commonwealth Government ensure that market participants engaged in the research & development of electric vehicle batteries are eligible and to receive, and are aware of, the research and development tax incentive.

11. The Commonwealth Government ensure that electric vehicles are adequately depreciated for tax purposes.

12. The Commonwealth Government review the *Australian Design Rules*, given the unique size and shape of light commercial electric vehicles.

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

From the above recommendations, ALC believes that the NSW Government can accelerate the uptake of light commercial vehicles by:

1. Continuing 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*.[12] 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.

2. Working with the Transport and Infrastructure Council (**TIC**) to look at ways to incentivise the use of electric heavy vehicles.

3. Working collaboratively with the Commonwealth Government 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.

The NSW Government

ALC supports the current actions taken by the NSW Government to improve uptake of electric vehicles.

Before discussing the potential actions for consideration identified by Transport for NSW, it is important to again be aware that freight operators will use electric vehicles in the future. Therefore, any action or policy pursued by the NSW Government should also serve to encourage greater uptake of electric freight vehicles in New South Wales.

[12] See http://newcastle.nsw.gov.au/Council/News/Latest-News/City-welcomes-smart-city-funding

Potential Actions for Consideration

Action	ALC Comment
Charging Infrastructure	
Trial installation of public charging stations in commuter car parks	Support. Dedicated public charging stations for electric freight vehicles could also be trialled in loading zones
Advocate for national charging standards and principles	Support – this is important for national consistency
Support wider access to fast-chargers in regional areas with commercial partners	Support
Facilitate open access fast-charging network along major regional routes	Support
Fleet	
Investigate setting electric and hybrid targets for transport light vehicles fleet	Further information required
Review government vehicle fleet procurement policies to remove barriers to EVs	Support
Strengthen *Government Resources Efficiency Program* to improve fuel efficiency for new government vehicles	No comment provided

Action	ALC Comment
Energy	
Model uptake of EVs in NSW, including opportunities and impacts on energy system	Support – this modelling should also include electric freight vehicles
Develop a map of potential EV charging infrastructure locations	Support – this should be done in consultation with the freight industry
Consider demand response programs that have potential to include EVs in the future	Support
Research	
Investigate customer behaviour when purchasing a car and what support could encourage more fuel-efficient vehicles	No comment provided
Conduct NSW and sub-regional analyses of EV uptake	Support – an analyses should also be done of EV uptake for light commercial vehicles
Electric Bus Trial	
Undertake an electric bus trial in Sydney or outer metropolitan bus regime	No comment provided

Action	ALC Comment
Planning	
Identify opportunities to support delivery of EV infrastructure and fast charging throughout strategic land use planning and guides	Support
Make residential and commercial buildings 'EV ready': - Advocate nationally to ensure new buildings cater for EV charging and avoid expensive retrofits - Provide guidance to body corporates, strata and building managers on options to retrofit charging points in existing buildings and consult with other jurisdictions on potential for nationally consistent approach - Investigate possible amendments to the Codes SEPP to allow EV charging points as exempt or complying development	Support
Information and Education	
Co-sponsor a digital platform with private sector to inform purchase decisions, including: - Total cost of ownership (**TCO**) calculator with ICE/EV comparison - Verified real-world EV range data - GPS-enabled EV charging assistant	Support – this data should also include electric freight vehicles
Improve customer awareness with EV showcase event for EV test drives and experiences	Support –electric freight vehicles should also be made available for test drives.

Conclusion

ALC believes that Transport for NSW should 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.

Many of the potential actions for consideration outlined by Transport for NSW can help achieve greater uptake of electric vehicles in the freight logistics sector. The NSW Government should actively engage with freight logistics operators on this matters to ensure that outcome can be achieved.

The ALC Electric Vehicles Working Group would welcome any opportunity to further engage with Transport for NSW as the *electric and Hybrid Vehicle Plan* is further developed.

If you have any questions or queries about this submission, please contact Lachlan Benson, ALC Interim CEO at Lachlan.Benson@austlogistics.com.au or on (02) 6273 0755.

Australian Logistics Council Electric Vehicles Working Group
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