Transport and Infrastructure Net Zero Consultation Roadmap

Take the survey

Department of Climate Change, Energy, Environment and Water

Response received at:
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Yes

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9 Who are you answering on behalf of?

Organisation

10 Organisation name

Woolworths Group

11 What best describes you or your organisation?

Industry

12 What sector do you represent?

Other: "Retail"

13 What state or territory do you live in?

New South Wales

14 Postcode

2153

15 What area best describes where you live?

City

16 1. Do you support the proposed guiding principles?

Not answered

17 1.1 Please add details to your response.

Not answered

18 2. Do you support the use of the avoid-shift-improve framework as a tool to identify opportunities for abatement?

Not answered

19 2.1 Please add details to your response.

Not answered

20 3. Do you agree the development of a national policy framework for active and public transport will support emissions reduction?

Not answered

21 3.1 Please add details to your response.

Not answered

22 4. What should be included in a national policy framework for active and public transport and how should it be developed?

Not answered

23 5. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the movement of people contributes to transport emissions reduction?

Not answered

24 6.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure that the movement of goods contributes to transport emissions reduction?

Not answered

25 6.2. How would these actions address the identified challenges and opportunities for emissions reduction in the movement of goods?

Not answered

26 7. Do you agree with the proposed net zero pathway for light road vehicles?

Not answered

27 7.1 Please add details to your response.

Not answered

28 8. The Australian Government is currently developing an Australian New Vehicle Efficiency Standard and has already begun to implement actions in the National Electric Vehicle Strategy.8.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce light vehicle emissions?

Not answered

29 8.2 How would these actions address the identified challenges and opportunities to reduce light vehicle emissions?

Not answered

30 9. Do you agree with the proposed net zero pathway for heavy road vehicles?

Not answered

31 9.1 Please add details to your response

Not answered

32 10. The proposed pathway for heavy road vehicles relies on a mix of battery electric, hydrogen fuel-cell and low carbon liquid fuels.Rank from 1 to 3, the order in which these should be prioritised for emissions reduction.

Not answered

33 10.1 Please add details to your response. Why did you rank them in that order?

Not answered

34 11. What role should low carbon liquid fuels play in the heavy vehicle

decarbonisation?

Not answered

35 12. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce heavy vehicle emissions?

Not answered

36 13. Do you agree with the proposed net zero pathway for rail?

Not answered

37 13.1 Please add details to your response.

Not answered

38 14. The proposed pathway for rail relies on a mix of battery electric, hydrogen fuel-cell and low carbon liquid fuels.Rank from 1 to 3, the order in which these should be prioritised for emissions reduction.

Not answered

39 14.1 Please add details to your response. Why did you rank them in that order?

Not answered

40 15. What role should low carbon liquid fuels play in rail decarbonisation?

Not answered

41 16. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce rail emissions?

Not answered

42 16.1 How would these actions address the identified challenges and

opportunities to reduce rail emissions?

Not answered

43 17. Do you agree with the proposed net zero pathway for maritime?

Not answered

44 17.1 Please add details to your response.

Not answered

45 18. The Australian Government is engaging in consultation as part of the development of the Maritime Emissions Reduction National Action Plan and those consultations will also inform the final Roadmap and Action Plan. 18.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce maritime emissions?

Not answered

46 18.2 How would these actions address the identified challenges and opportunities to reduce maritime emissions?

Not answered

47 19. Do you agree with the proposed net zero pathway for aviation?

Not answered

48 19.1 Please add details to your response.

Not answered

49 20. The Australian Government has already engaged in consultation on aviation decarbonisation through the development of the Aviation White Paper and those consultations will also inform final Roadmap and Action Plan.

Not answered

50 20.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce aviation emissions?

Not answered

51 21. Do you agree with the proposed net zero pathway for transport infrastructure?

Not answered

52 21.1 Please add details to your response.

Not answered

53 22. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce transport infrastructure emissions and ensure that transport infrastructure is ready for and enables low-emission transport modes?

Not answered

54 22.1 How would these actions address the identified challenges and opportunities to reduce transport infrastructure emissions?

Not answered

55 23. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the energy mix is ready to support transport emissions reduction?

Not answered

56 24. How should the use of low carbon liquid fuels (LCLFs) be prioritised across different transport modes over time to achieve maximum abatement?

Not answered

57 25. What are the best ways for the Australian Government to work collaboratively with industry, business, governments and communities to implement the proposed pathways?

Not answered

58 25.1 What are good domestic or international examples of partnership and collaboration on transport and transport infrastructure emissions reduction that could inform the final Roadmap and Action Plan?

Not answered

59 25.2 What opportunities can Government leverage to show leadership in Australia and internationally?

Not answered

60 26. What measures and metrics should be used to evaluate the final Transport and Infrastructure Net Zero Roadmap and Action Plan?

Not answered

61 26.1 What other data and evidence could governments use and how could this offer further insights on the pace, scale and location of transport emissions reduction pathways?

Not answered

62 27. Do you have any feedback on the proposed review process?

Not answered

63 28. Do you have any further feedback on the Consultation Roadmap and proposed pathways?

Not answered

64 28.1 Is there anything missing? Are the sections appropriately integrated? Is the Roadmap appropriately ambitious?

Not answered

65 29. Is there any further information or documentation that you wish to be considered with your submission?

Not answered

66 Would you like to upload a document?

Yes

67 Have you removed any identifying information from your submission?

Yes

68 Upload a submission

Woolworths Submission - Cth, Transport Net Zero 5 August 2024 (1).pdf

69 Upload a submission

Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered

5 August 2024

Department of Infrastructure, Transport,
Regional Development, Communications and the Arts
GPO Box 3090
Canberra ACT 2601

By email: NetZero@infrastructure.gov.au

Dear Net Zero team,

Re: Submission, Transport and Infrastructure Net Zero Consultation Roadmap

Woolworths Group (Woolworths) welcomes the opportunity to provide feedback in response to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (the Department) Transport and Infrastructure Net Zero Consultation Roadmap.

Woolworths was founded in 1924 and has served Australian communities for almost 100 years. We are Australian-owned and are Australia's largest private sector employer, with 180,000 hard working team members, many of whom serve more than 20 million customers a week across more than 1,250 Australian Woolworths Supermarkets, Metro Food Stores and BIG W Discount Department Stores.

We operate one of the largest supply chain and logistics networks in Australia through our supply chain business, Primary Connect, which operates 21 Distribution Centres across Australia, helping to support food security, including for some of our most remote regions.

Primary Connect provides transport from our Distribution Centres to stores or Customer Fulfilment Centres, working with more than 70 transport carrier partners to service our customers each day. Primary Connect transports goods by road, rail and sea through local and international sourcing covering 315 ports globally and engaging 7,500 supply partners, including providing commercial logistics solutions to improve the efficiency and productivity of supply chain operations.

In addition, our HomeRun business provides last mile delivery services for supermarkets and our general merchandise brands, including BIG W, HealthyLife, PetStock and MyDeal. In the first half of FY24, we completed 10 million grocery deliveries, containing 405 million items to 1 million active eCommerce customers. These grocery deliveries are facilitated through a fleet of ~1,200 refrigerated 4.5 tonne Gross Vehicle Mass delivery trucks operated via a third party logistics partner with its network of over 3,000 contractors, as well as in partnership with rideshare operators.

SUMMARY OF KEY POSITIONS AND RECOMMENDATIONS

The structure of this submission reflects the Consultation Roadmap. We focus on the Roadmap chapters related to road transport issues for light commercial and heavy vehicles, and infrastructure requirements.

Since 2018, we have taken a 'test and learn' approach to the introduction of EVs to our operations. In that time, we have gained significant expertise in the challenges and opportunities associated with low and zero emissions vehicles as part of our transport decarbonisation plans. We have drawn on this experience to provide feedback that focuses on the following issues:

- Nationwide harmonisation on key policies to support investment confidence (road pricing, stamp duty, registrations, weights).
- Graduated introduction of Road User Charges or similar incremental charges, with national consistency (regardless of whether these are levied at the federal or state level).
- Reform of weight and dimension allowances to expand the vehicle supplier base, reduce costs and improve productivity, and introduce Class C license weight restriction flexibility for Light Commercial Vehicles.
- Investment in charging infrastructure and energy grid development to enable efficient transition, and support for renewable energy.
- Planning support to enable local operations flexibility (restrictions on delivery hours, loading locations) to leverage benefits of quieter operations.
- Investment in local industry for vehicle and componentry supply, and assembly.
- Development of skills and education to support emerging needs in vehicle maintenance and after sales support.

The following is a summary of our recommendations:

Reform topic	**Recommendation**	**Detail**
Chapter 1: Introduction	The transition to net zero should be strategically and nationally coordinated to avoid unintended consequences such as prolonging the journey to net zero, or reducing the effectiveness of transport networks.	Page 4
Chapter 2: Rethinking our transport networks and systems	Review the investment required to improve both road and rail freight resilience in light of increased weather events, both in the near and longer term.	Page 5
Chapter 3: Net zero pathways for each transport mode Road - Light Vehicles	Support the collection and sharing of EV operational data to help participants in the industry accurately value their investments and price associated risks. Institute tax concessions and administrative charges associated with buying and operating EVs. To reduce the Total Cost of Ownership penalty associated with EVs, Class C license holders should be permitted to drive an EV up to 5.0T Gross Vehicle Mass. Streamline vehicle certification processes.	Page 5
Chapter 3: Net zero pathways for each	Government funding through the Australian Renewable Energy Agency, or other suitable mechanisms, is recommended to	Page 8

transport mode Road - Heavy Vehicles	enable the trialing of new technologies that are not otherwise commercially viable. Introduce national standards that enable adoption of international heavy vehicles with higher steer axle mass limits.	
Chapter 4: Supporting transport's net zero pathways	Provide financial support for new charging infrastructure and investment in grid-connected batteries to balance power supply with daily demand peaks. Support property owners to design and develop or retrofit sites to maximise EV charging facilities. Consider the increase in demand for electricity from commercial EVs in electricity generation, transmission and distribution planning. Sponsor research to understand the fire risks presented by EV and practical and cost-effective ways to reduce those risks and safely manage fires if they occur.	Page 10
Chapter 5: Achieving net zero together	Road User Charges should be managed on a national basis and applied without disincentivising EV ownership. Reform planning and EPA guidelines on noise to deliver increased flexibility in delivery timeframes to incentivise the adoption of Zero Emissions Vehicles in globally innovative reform.	Page 14

DETAILED FEEDBACK

Chapter 1: Introduction

We believe the guiding principles and framework put forward in the consultation roadmap are sound. We note that the transport decarbonisation journey requires a balanced approach that meets the needs of emissions reduction whilst retaining the community and commercial benefits of transport.

We also note that solutions should be developed with a view to the ultimate goal of net zero emissions by 2050. For example, decisions to maximise abatement for 2030 may include lower emissions solutions like drop-in biofuel that can be adopted widely on existing equipment. However, achieving zero emissions transport may require a concurrent focus on solutions like hydrogen fuel that take longer to adopt and rollout. This means that investment decisions made now will affect the degree to which a net zero outcome can be achieved by 2050. The transition to net zero should be strategically coordinated to avoid unintended consequences such as prolonging the journey to net zero, or reducing the effectiveness of transport networks.

Recommendation: The transition to net zero should be strategically coordinated to avoid unintended

consequences such as prolonging the journey to net zero, or reducing the effectiveness of transport networks.

Chapter 2: Rethinking our transport networks and systems

An increase in investment in rail infrastructure, to put a greater share of freight on rail, is vital to underpin network resilience in the context of increasing climate change events. Major flood-related transport outages in recent years have seen significant product shortages, in particular in Western Australia and the Northern Territory, underscoring the need to invest in infrastructure resilience. We recommend the government fully review the investment required to improve both road and rail freight resilience in light of increased weather events, both in the near and longer term.

We are delivering on our own pipeline of new supply chain facilities through, for example, the construction of two new distribution centres at Moorebank, together with Qube, representing a $1.3 billion investment. Rail infrastructure investments by the Federal and State Governments at Moorebank Logistics Park were key to our site selection, as the direct rail access to Port Botany will provide strategic benefits for our network and help remove at least 26,000 of our truck movements from NSW roads each year. This will increase our mode shift from road to rail and reduce emissions.

Recommendation: Review the investment required to increase rail freight capacity and to improve both road and rail freight resilience in light of increased weather events, both in the near and longer term.

Chapter 3: Net zero pathways for each transport mode

Road - light vehicles

Action is needed to promote the uptake of Electric Vehicles (EV) in the light commercial vehicle (LCV) sector (vehicles under 4.5 Tonnes Gross Vehicle Mass (GVM)), especially by logistics and fleet operators. It is widely acknowledged that EVs have less range and payload capabilities compared with equivalent-sized Internal Combustion Engine (ICE) vehicles. These are the most important factors to address to foster wider uptake of EVs in the light commercial category.

Other major challenges relate to the Total Cost of Ownership (TCO) for EVs and their commercial appeal. Access to EV charging infrastructure is addressed in response to Chapter 4.

Payload penalties

An EV's implied payload, due to the weight of the vehicle's battery, is a major consideration. The EVs we have reviewed carry several hundred kilograms less grocery payload than general delivery vehicles.

In our business, delivery trucks are driven by operators with a Class C licence that allows them to drive a vehicle that is up to 4.5T GVM. A fully assembled EV with a refrigerated body has an unloaded weight of about 3,400kg. This is 400kg more than an equivalent ICE delivery vehicle. Whilst an EV is capable of carrying more payload, if the total vehicle weight (including payload) is above 4.5T, the driver must have a commercial drivers' license.

Commercial driver licenses are more specialised, time consuming and expensive to attain and it is therefore much more challenging to recruit qualified drivers in sufficient numbers to fulfill our customers' delivery needs.

The only practicable solution presently available is to reduce the grocery payload for EVs. A payload reduction of a few hundred kilograms means the EV may carry approximately six to eight fewer customer orders compared to an equivalent ICE vehicle. That in turn means that we need to use more delivery vehicles to deliver the same number of orders which has a material effect on productivity - we not only use more vehicles, but each vehicle ends up making fewer customer deliveries per hour - which increases fleet operating costs. The productivity loss also exacerbates driver recruitment challenges, and unnecessarily adds to road congestion.

This challenge can be overcome with weight concessions for drivers on a Class C licence when operating EVs. This would reduce productivity barriers for fleet operators transitioning to EVs. Our recommendation is to support a transitional allowance of up to 500kg to support transition to EVs, without introducing a further productivity penalty. This approach is consistent with countries such as the UK, with the overall GVM remaining under the comparable standard licence in NZ which is 5.5T.

Our third party logistics partner engages more than 3,000 Class C licencees as contractors to operate our delivery fleet. If a weight concession cannot be achieved, to overcome the productivity challenges, these 3,000 contractors will require acquiring Light Rigid driver licenses, which would unnecessarily increase driver costs.

Total Cost of Ownership

Total Cost of Ownership (TCO) for commercial EVs is affected by several factors, for which a range of policy solutions are available. For logistics operators that lease their fleet (for instance, our home delivery business), taking a TCO view considers EV costs associated with:

- leasing;
- maintenance and other operating requirements (e.g. insurance);
- charging infrastructure installation;
- charging infrastructure maintenance;
- electricity to operate vehicles (generally renewably sourced).

Due to higher commercial EV prices compared to ICE prices and the lower second hand resale values for earlier models of EVs, Fleet Management Organisations set lease costs at a rate that is 60-70% higher than comparable ICE vehicles.

We understand Fleet Management organisations are unwilling to take any risk on EV residual values, as they have seen the new vehicle price of more recent models of passenger EVs fall materially. This, in most cases with limited exceptions, reduces the value of second hand EV models to almost nothing. In addition, the advanced capabilities of more recent EV models compound the penalty of investing in early model EVs.

Another barrier to entry for potential commercial EV operators is the comparative cost of insurance. Insurers of commercial EVs charge more than three times the price of a comparable ICE vehicle.

Finally, the significant payload differential between EVs and ICE vehicles in the light commercial segment that was detailed earlier in this submission has a significant impact on TCO.

These factors combine to mean that, despite significant savings from electricity charging compared to liquid fuel, in the absence of grant funding, the implied TCO of a commercial EV is at least 25-30% higher than an ICE vehicle.

Governments can provide assistance by supporting the collection and sharing of EV operational data to help participants in the industry accurately value their investments and price associated risks. This would help fleet management organisations to offer more competitive leases.

In addition, policies that have proven effective for the domestic vehicle market can be extended to light commercial vehicles. For example, light commercial vehicles could benefit from targeted tax concessions, similar to the Fringe Benefits Tax exemption that currently applies to passenger EVs - a policy has resulted in a significant uptake of EV passenger vehicles in the novated leasing segment.

Another mechanism that would help bridge the upfront capital costs for new EVs is to reduce stamp duty and registration costs for LCVs. Policies that foster a mature second-hand market should also be explored.

A focus of government action should be to increase the availability, affordability and commercial appeal of EVs in the Australian commercial vehicle segment. The need for this action is illustrated by the fact that, in the 4.5T GVM segment, our HomeRun business has identified only one model that is suitable for use in last mile delivery operations.

The extremely limited supply of electric light commercial vehicle models heightens upfront capital costs and also reduces the likelihood that available models are suitable for last mile delivery business models. That is preventing, or at least slowing, a wide-scale rollout of EVs to replace Internal Combustion Engine vehicles.

Broadening the number of vehicles in the domestic market can be achieved with policies that:

- enhance the attractiveness of the Australian market for international Original Equipment Manufacturers, and
- streamline vehicle roadworthiness certification for all vehicles made or imported into Australia.

Until EV technology advances in its capabilities, and becomes more readily available in Australia, the existing EV fleet's capabilities can deter greater uptake and use in commercial delivery operations.

Recommendation: Support the collection and sharing of EV operational data to help participants in the industry accurately value their investments and price associated risks.

Recommendation: Institute tax concessions and lower administrative charges associated with buying and operating EVs.

Recommendation: To reduce the Total Cost of Ownership penalty associated with EVs, Class C license holders should be permitted to drive an EV up to 5.0T Gross Vehicle Mass.

Recommendation: Streamline vehicle roadworthiness certification for all EVs made or imported into Australia.

Road - heavy vehicles

The proposed pathway to decarbonise heavy vehicles is logical, however there are some short term considerations to include over the proposed pathway.

We note that a 'heavy vehicle' refers to one that operates above 4.5T Gross Vehicle Mass and we operate several in this category. In the context of traditional food, liquor and general merchandise, the majority of operations are with heavy articulated vehicles (Prime Mover and Trailer) in either single or B-Double configurations. These are generally operated by our transport carrier partners, including Linfox and Toll.

The pathways to decarbonisation of heavy vehicles are affected by the distance and type of transport task required. To select the right technology, consideration must be given to the operational needs of payload efficiency and driver hours.

- **Short haul local delivery operations:** For short-distance deliveries within metropolitan areas, battery electric vehicles (BEVs) offer a promising solution. Their zero tailpipe emissions and quiet operation make them suited for urban environments. Range limitations need to be balanced with charging infrastructure and solutions, which affect the ability to scale. Government support is crucial for expanding charging networks and incentivising the adoption of EVs by transport operators (see our response under Chapter 4 for more detail).

- **Long distance regional and interstate operations:** Decarbonising long-distance heavy vehicle transport presents a more complex challenge. Battery EVs are not yet commercially or operationally viable for long-distance routes.The alternative technologies of hydrogen fuel cells and low carbon liquid fuels are currently expensive and not yet available at a scale to support a start to the transition. The costs for both remain significant and will require government support in the early phases to offset upfront costs. For these longer distance operations the refueling networks will likely need to operate beyond a single operator, further increasing the complexity of transition. Additionally, aligning refueling or recharging solutions with driver hour requirements is crucial to ensure operational efficiency and driver well-being. This will be imperative to ensure that the transition to low-emission technologies does not compromise driver safety or productivity.

Pathway for Heavy Vehicles is logical with opportunity to go further

Given much of the development of Zero Emissions Vehicles is being driven through more stringent legislation in Europe, North America and Asia it would be prudent to align Australian vehicle specifications with those jurisdictions to increase vehicle availability and therefore reduce costs.

The move to accept increased vehicle width to 2.55m, and NSW's concession on mass limits for heavy low and zero emissions vehicles operating on the state road network, are a good start. More is needed to address steer axle mass issues, as indicated in the discussion paper, and the Commonwealth could lead efforts to standardise the approach taken by all states and territories. National alignment on rules to enable the introduction of these vehicles should be an explicit element of the pathway.

Technology prioritisation

The paper presents three potential technologies to support decarbonisation of heavy vehicles. The prioritisation of these is difficult to do in isolation. The current focus is on battery electric vehicles, but there may be competitive tension with other technologies in the future.

1. **Battery Electric:** This is the current focus for shorter distance deliveries, such as urban store delivery. The technology is becoming more readily available to test, charging infrastructure can be integrated with Distribution Centre operations, and the electricity supply is readily available.

2. **Hydrogen**: This is often seen as the preferred technology to progress linehaul movements, however the cost of vehicles, availability and cost of hydrogen, and the complexity of delivery and refueling infrastructure means testing and scaling is more difficult.

3. **Low carbon liquid fuels:** These are not presently a focus because they represent a short-term offset which is useful for early stage and partial abatement. However, in the longer term low carbon fuels are not a zero emission solution. Nevertheless, because the technology for vehicles and operations does not change, if supply can be created at a price that the market can bear, it can be introduced quickly to progressively drive carbon reduction in the near term. This technology has greater dependence on fuel suppliers to bring this to market.

It is imperative that the investment and rollout of these technologies is well timed. While all three will have a role to play, fragmentation of investment may further dilute or confuse the ability to scale solutions in the near term.

Government support for heavy vehicles

Government funding through the Australian Renewable Energy Agency, or other suitable mechanisms, is recommended to enable the trialing of new technologies that are not otherwise commercially viable.

The Government can also assist by acting as a coordinator of efforts across the complex ecosystem that makes up long distance heavy vehicle logistics. For example, a body of work that would benefit from governmental support is introducing standards across jurisdictions that enable adoption of international heavy vehicle models which generally operate with a higher steer axle mass than is currently permitted in Australia. Allowing those vehicles to operate in Australia is critical to a zero emissions vehicle transition without a commercial penalty due to reduced payload efficiency.

Government should assume the role of monitoring legislative settings and policy in key manufacturing regions such as Europe, USA and China. If policy settings lead manufacturers down a path of battery electric vehicles or hydrogen-fuelled vehicles versus low carbon liquid fuels, we should be aware that is where vehicle production will follow. Australia needs to have the infrastructure and energy availability to support the direction of global technology.

Recommendation: Government funding through the Australian Renewable Energy Agency, or other suitable mechanisms, is recommended to enable the trialing of new technologies that are not otherwise commercially viable.

Recommendation: Introduce national standards that enable adoption of international heavy vehicles with higher steer axle mass limits.

Chapter 4: Supporting transport's net zero pathways

Transport infrastructure

Electrical charging infrastructure

Charging infrastructure to support a growing EV fleet is crucial. Range limitations and the associated 'range anxiety' is a barrier to EV uptake and investment in charging infrastructure is required to create confidence that fleet conversion will be supported without a compromise to the current transport experience. To illustrate this issue, we note that EV Light Commercial Vehicles can travel up to 150 km on a single charge, and a comparable fuelled vehicle can travel up to 450 km on a single tank of fuel - more than double the distance.

The EV charging process is considerably different to refuelling at a petrol station. For example, when a fleet is managed by a logistics partner, the fleet operating model needs to be considered, particularly for where and when EVs are charged, and which parties are responsible for providing and managing vehicle refuelling or charging.

The timeframes for recharging EVs are considerably longer than refuelling ICE vehicles, impacting the turnover at charging points, the amount of planning ahead for vehicle use and driver hours. Of particular importance to fleet operators is charging availability as and when needed, unencumbered by other users, and the operational reliability of these charging units.

In contrast to passenger vehicles, which are often charged at the owner's home, Light Commercial Vehicles are usually charged at the depot in large numbers and at similar times. This places a significant demand on the local electricity supply network and has implications for grid stability. If power system upgrades are necessary, this comes at a very high cost and may be a barrier to more operators converting their fleets to EV. This barrier can be reduced with financial support for new charging infrastructure and government investment in grid-connected batteries to balance power supply with daily demand peaks.

Many of our LCVs are parked overnight at a range of off-premise locations after completing their deliveries. In many instances, the drivers of these vehicles are not responsible for them overnight. The range of overnight garaging locations requires a range of solutions for charging unit locations, cost arrangements and responsibilities. Multiple stakeholders - landlords, businesses, fleet operating partners, drivers and councils - need to be engaged in designing a charging solution that is fit for purpose for light commercial EVs and passenger fleets.

Feasibility studies to determine preferred locations and structures for charging infrastructure would help to maximise investment returns and align fleet conversions. Development of software solutions to intelligently manage the load across the needs of multiple user groups throughout the day can reduce strain on the grid.

For fleet operators, higher capacity charging equipment is necessary but significantly more costly to purchase. The electrical infrastructure works are much more expensive to install than lower capacity charging.

The planning, design, procurement and approval of sites (for any use, but particularly industrial usage) is complex across the various levels of government, often taking years in the planning process. To successfully and efficiently deliver infrastructure suitable for heavy vehicle charging that supports logistics hubs and primary freight routes, a holistic approach across the jurisdictions is needed to ensure the national energy network is considered.

We would support the Commonwealth in driving a pilot program to ensure that the various planning authorities and governments across the country are working collectively, with industry and community input. A first step could be to scope the challenges associated with planning and development and identify the highest priority locations for charging infrastructure to facilitate a streamlined planning process.

Charging stations of the future

There are locations not traditionally associated with refuelling but which present opportunities to introduce EV charging infrastructure, such as car parks, offices, retail properties such as supermarkets, cafes and restaurants. In practice, subject to available site power supply, most properties with an accessible carpark can be used for EV charging.

For example, Woolworths and our partners currently provide 241 charging points across 28 of our owned and leased sites across our network, with an additional 20+ sites in development with EVs.

Properties can be used as charging stations of the future. Owners and operators of these facilities need practical support to design and develop sites that facilitate EV charging, as well as retrofit and convert existing sites.

Measures to help speed up and increase recharging infrastructure across Australia, particularly in regional and remote locations, could include:

- providing dedicated commercial vehicle parking zones for Light Commercial EVs;
- prioritising electrical infrastructure upgrades for properties including EV charging;
- enabling industry collaboration to establish large-scale recharging hubs, combining efforts by property owners, utility providers and EV users.

Electricity generation

According to the Electric Vehicle Council, “if every car on Australia’s roads today was to become electric, this would result in around a 15% increase in overall electricity demand.”[1] The increase in electricity demand should inform electricity generation, transmission and distribution planning. It is also a reminder

[1] Electric Vehicle Council, *Can the current energy grid handle the increasing number of electric vehicles on the road?*. Available at: https://electricvehiclecouncil.com.au/docs/can-the-current-energy-grid-handle-the-increasing-number-of-electric-vehicles-on-the-road-will-widespread-adoption-of-evs-lead-to-power-outages/. Accessed 17 June 2024.

that the environmental benefits of electric vehicles increase when the percentage of electricity supplied to the grid from emissions-free sources increases.

In some locations, such as where the grid serves logistics hubs or fleet operator home bases, the increase in demand may be more significant. For example, a complete transition to a fully electric LCV fleet may increase a depot's electrical supply requirements by about 70%. The effect of this electricity supply demand on grid infrastructure can be partially mitigated by scheduling vehicle charging to lower demand periods. The batteries of EVs that are supplying back to the grid (V2G) could help support the grid during times of high usage or low renewable generation. This would also help to reduce grid investment costs and allow for innovation in charging models.

Despite those mitigation options, the large increase in demand for electricity around our stores would probably still have an impact on the capacity of local grid infrastructure.

Fire safety

Concerns are being raised by fire safety experts regarding the safety of EVs in some circumstances. This may be due to EVs being a relatively new technology that has only recently become widely available and industry experience with EV-related fires being low. We are not aware of many instances of EV fires in Australia, however our experience is that the sentiment of fire and rescue services and their concerns is acting as a deterrent for some landlords to provide approval for the installation of EV charging infrastructure as desired by EV fleet operators. This is especially prevalent with regard to underground carparks.

For example, one of our shopping centre operator partners is hesitant to approve EV charging installations in underground carparks for trolley collection vehicles. In another example, the owner of a site from which we fulfil online deliveries has requested that we do not install charging equipment within 10 metres of the fulfillment centre. This would present a challenge for the next stage of our charging infrastructure installation process, which is needed to complete our EV transition.

Fire safety engineers are able to design fire risk mitigation options, but these are often complex and costly, which can affect overall project viability.

More research is required to understand the fire risks presented by EVs and practical and cost-effective ways to reduce those risks and safely manage fires if they occur. The government, via bodies like the Building Ministers Meeting, can help foster a debate on ways to address this issue.

Recommendation: Provide financial support for new charging infrastructure and investment in grid-connected batteries to balance power supply with daily demand peaks.

Recommendation: Support property owners to design and develop or retrofit sites to maximise EV charging facilities.

Recommendation: Consider the increase in demand for electricity from commercial EVs in electricity generation, transmission and distribution planning.

Recommendation: Sponsor research to understand the fire risks presented by EV and practical and

cost-effective ways to reduce those risks and safely manage fires if they occur.

Transport energy use

Efficiency and emissions standards

We support efforts to mandate fuel efficiency and emissions standards, such as Euro 6 for light vehicles. For the majority of the Woolworths heavy vehicle fleet, we adhere to the Euro 5 or 6 standard. This has the added benefit of prompting a newer fleet with better safety performance and this would translate to passenger fleets as well.

Enhanced fuel efficiency standards across all classes would increase supply of electric vehicles, as well as incentivise the shift away from ICEs. This must be paired, however, with the variety of other regulatory reforms, including those supporting increased vehicle supply (*e.g.* changes to vehicle class dimensions) and the ability to access higher grade fuel than what Australia currently uses.

Fuel efficiency standards for heavy vehicle classes would likely increase the supply of low or zero emissions vehicles in that class. However, the technology available in this class of vehicles is far less mature than that in lighter passenger vehicles, so it may be some time before zero emission alternatives are accessible and viable.

Based on current and foreseeable battery technologies, we see heavy vehicles as predominantly requiring a hydrogen-based solution rather than battery electric solution. This requires concurrent investment in supporting infrastructure across Australia, akin to the 'Hydrogen Highway' announced in March 2022 by State Governments along the eastern seaboard.

Hydrogen

Beyond EVs, there is the prospect of considerable use of hydrogen, particularly in long haul freighter fleets. The 'Hydrogen Highway' from Queensland to Victoria is a commendable and essential initiative by governments, spurring considerable interest in the technology across industry. Given Australia's geographic scale, this crucial initiative will need to be replicated across the rest of Australia to support a decarbonised road transport fleet.

We are a member of a coalition of companies with a shared objective to achieve a consensus on the technologies to advance, prove the concept for a transition, and accelerate emission reductions.

Together, we are aiming to build a net zero line haulage pilot in the 2026 financial year between Sydney and Melbourne. This route has been chosen because of the high potential for significant CO_2 reductions, with road freight emitting ~13 MT CO_2-e on that route. There is also an absence of other net zero infrastructure, such as BEV truck charging infrastructure, hydrogen refuelling network, and renewable diesel supply. So far, the project team has learned that proof of concept and pilot learnings will vary across fuel technology options.

In terms of testing fuel options, renewable diesel pilots can deliver some immediate insights in relation to emission reductions, however for long term zero emissions solutions, trials with Fuel Cell EV (FCEV) and/or H_2 ICE are needed.

While safety control and value chain collaboration learnings apply to all technologies, a Battery EV pilot will provide additional insights including payload versus range performance, prime mover reliability and maintenance, and cost and time to upgrade the grid. The FCEV/H_2 ICE pilot will, similar to battery electric vehicles, provide many prime mover related insights, complemented with H_2 fuel chain lessons such as modular H_2 production, offtake agreements, and the role of partnerships.

Chapter 5: Achieving net zero together

Road User Charging

A funding mechanism is essential to ensure our road network is well maintained. We support EVs contributing to road funding over time, and agree that Road User Charging (RUC) is an opportunity to better link road usage to road maintenance costs.

However, the existing approach by several states has been to adopt RUCs that act as a disincentive to operate EVs before they are established in the wider fleet and before the Total Cost of Ownership for EVs reaches parity with Internal Combustion Engine vehicles. A potential solution is to offer Road User Charging exemptions for EVs to encourage uptake. Any exemption should not continue into the longer term, so as to balance the need for government revenue for transport infrastructure, without unduly curtailing EV adoption.

Supply chains are national in scope and not limited to state boundaries. A single, unified RUC mechanism is essential for commercial vehicles to give confidence to both buyers and suppliers of EVs, particularly those that traverse state and territory borders. Like fuel excise, we note that it would be preferable and logical for RUCs to be managed by the Commonwealth.

Ways to determine the application of Road User Charging to EVs may include when the proportion of EVs reaches an agreed threshold, or EV road use reaches an agreed percentage of all kilometers traveled by vehicles. Another option is to apply RUC when the Total Cost of Ownership of EVs is comparable to ICE vehicles.

Planning reforms to recognise the quiet amenity of Zero Emissions Vehicles

Electric and hydrogen powered vehicles, and battery enabled refrigerated trailers, operate at a lower overall noise level. The associated social benefit is less transport-related noise for the communities in which they operate.

There is an opportunity to review and streamline local planning guidelines to reflect the effect of the quieter technology. Doing so would overcome local level regulatory barriers that include delivery curfews that reduce delivery efficiencies and lead to more vehicles on the road in peak traffic time. We note that noise associated with deliveries is not only from vehicles, and can also be managed with better material handling equipment, pallets, and noise insulation.

For example, jurisdictions in the United Kingdom and Europe have advanced standards and equipment specifications to support operating at a lower level of noise. If Australia followed their lead and reformed state level planning guidelines and EPA noise guidelines, there would be an extra incentive for businesses

to invest in ZEVs due to the associated productivity benefits. Ideally this would be delivered with national consistency to support logistics operations across borders.

Skills development

Climate change policy can drive local skills development and employment, and EVs and hydrogen-fuelled commercial vehicles demonstrate this opportunity.

Overseas-based manufacturers have achieved sufficient scale to act as global leaders in vehicle design and production, but there is still an opportunity to support local assembly of vehicles, such as heavy vehicle assembly with Volvo in QLD.

With the right policy settings, local manufacturers with bespoke solutions can also thrive. For example, we have partnered with Australian Clean Energy Electric Vehicle Group (ACE EV Group) on the next generation of shopping trolley collection vehicles.

With ACE-EV Group, we've already deployed 15 electric trolley collection vehicles to stores. They will collect up to 1000 trolleys a day, depending on the store, from carpark collection bays and surrounding streets. These custom-built vehicles were developed and manufactured locally in Western Sydney by ACE-EV Group. They were designed specifically for our team's needs, with lower tray heights to make it easier to load and unload trolleys.

Beyond manufacture and assembly, the total lifecycle support of vehicles demands a new cohort of skilled workers with new and specialised electrical engineering capabilities.

Recommendation: Road User Charges should be managed on a national basis and applied without disincentivising EV ownership.

Recommendation: Reform planning and EPA guidelines on noise to deliver increased flexibility in delivery timeframes to incentivise the adoption of Zero Emissions Vehicles in globally innovative reform.

CONCLUSION

Thank you for the opportunity to provide this submission for consideration. Please contact [redacted] Manager, Government Relations and Industry Affairs - Sustainability by email at governmentrelations@woolworths.com.auif you have any questions about our submission. We welcome ongoing engagement throughout the reform process.