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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NewVolt

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Yes

5 First name
Anthony

6 Last name
Headlam

7 Email
[redacted]

8 Phone

[redacted]

9 Who are you answering on behalf of?

Organisation

10 Organisation name

Not answered

11 What best describes you or your organisation?

Industry

12 What sector do you represent?

Energy
Climate change/net zero
Infrastructure
Heavy road vehicles (trucks, buses etc.)

13 What state or territory do you live in?

Victoria

14 Postcode

3015

15 What area best describes where you live?

City

16 1. Do you support the proposed guiding principles?

Yes

17 1.1 Please add details to your response.

Please see attached submission

18

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

Yes

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?

Yes

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?

Please see attached submission.

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

Please see attached submission.

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

Yes

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?

No

31 9.1 Please add details to your response

We think the clear pathway is battery electric tucks for the vast majority of use cases

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.

1: Battery electric
2: Low carbon liquid fuels
3: Hydrogen fuel cell

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?

Consultation with respect to targets and policy instruments

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

NewVolt_Net_Zero_Consultation_Roadmap_5_August_2024.c8227078_Redacted.pdf

69 Upload a submission

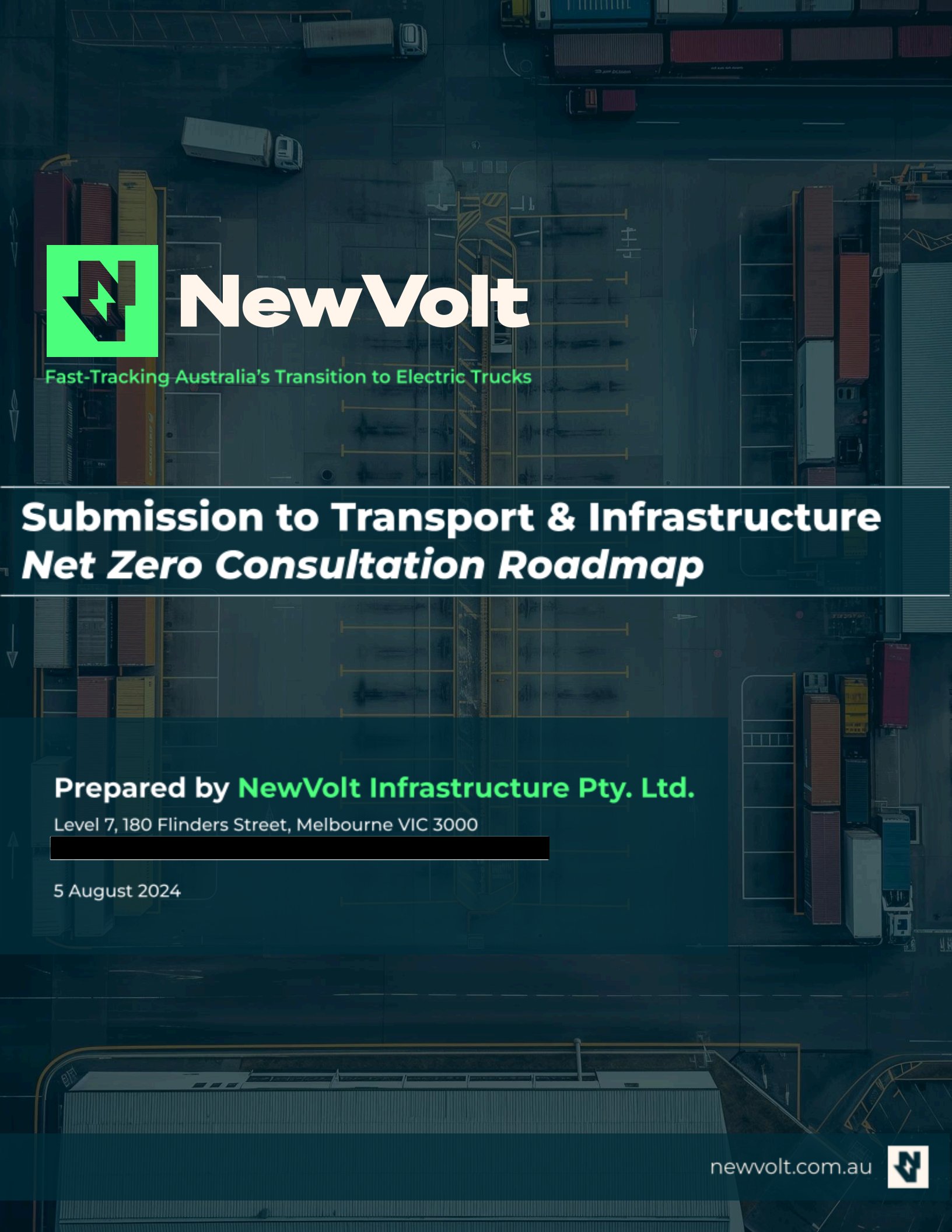
Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered



NewVolt

Fast-Tracking Australia's Transition to Electric Trucks

Submission to Transport & Infrastructure *Net Zero Consultation Roadmap*

Prepared by NewVolt Infrastructure Pty. Ltd.

Level 7, 180 Flinders Street, Melbourne VIC 3000

[redacted]

5 August 2024

The pathway for heavy vehicles *is* clear

NewVolt Infrastructure Pty Ltd (**NewVolt**) welcomes the opportunity to make a submission to the *Department of Infrastructure, Transport, Regional Development, Communications and the Arts* in connection with the the *Transport & Infrastructure Net Zero Consultation Roadmap* (the **Roadmap**).

NewVolt's mission is to support freight efficiency and supply chain security for Australian industry in a net zero world. To achieve this, NewVolt is developing a national network of shared use truck charging hubs, powered by renewable energy, to enable the road transport industry to transition to electric trucks.

NewVolt congratulates the Department on the work it has undertaken to inform the Roadmap and the consultative approach to develop policy in the critical and difficult area of transport decarbonisation.

NewVolt's submission will focus on the net zero pathway for heavy vehicles.

This submission draws on the previous submission NewVolt provided to the House of Representatives Standing Committee Inquiry into the transition to electric vehicles in March 2024.

For the reasons set out in this submission, NewVolt's view is that battery electric trucks (**electric trucks**) are not only the best pathway for heavy vehicles to decarbonise but pursuing that pathway will also provide significant parallel benefits to Australian society and the trucking sector. In addition to supporting decarbonisation, the electrification of Australia's road freight will improve population health by eliminating dangerous exhaust pollution and be a catalyst for advancing freight efficiency and energy security given Australia's low cost renewable energy resources.

Trucks and sunshine

The Australian road freight sector is strategically critical to the Australian economy. The sector's carbon emissions are large and form an increasingly large share of Australia's aggregate emissions. Given the unique importance of trucking to the Australian economy, tailored policy settings are required with respect to heavy vehicles and the decarbonisation of the transport sector.

Access to low-cost renewable energy and a concentrated road freight network means Australia is uniquely positioned to take advantage of the enormous opportunities on offer by transitioning to electric trucks.

In short, the adoption of battery electric truck technology by the Australian road freight industry, underpinned by renewable energy and the charging infrastructure to deliver it, will support greater freight efficiency and energy security for the Australian economy over the long run.

Whilst aspects of the freight task may require alternative zero emission solutions, (such low carbon liquid fuels and electrified trailers), NewVolt believes that the vast majority of the road freight task including urban delivery, regional haul and most long haul freight will most efficiently be performed with battery electric trucks as the existing truck fleet is replaced. This is *particularly* so when the costs of infrastructure and energy are considered. The electric truck technology that can efficiently deliver decarbonised road freight already exists and is only getting better.

NewVolt recognises that, in the near term, reducing emissions from the existing fleet is also critical and alternative solutions including low carbon liquid fuels, drop in technologies (such as electrified trailers/axles & dollies), and potentially electric conversion solutions should all be considered.

Trucks can do heavy lifting

Regarding the decarbonisation of the transport sector, the Government has to-date largely focused on passenger vehicles. However heavy vehicles, predominantly used in road freight, are responsible for 38% of all transport emissions.[1] The emissions intensity of Australian trucks reflects that Australia's truck fleet has an average age of approximately 15 years.[2]

The high emissions intensity of trucks presents the government with a unique opportunity to make substantial progress on emissions targets by directing policies on the electrification of road freight.

[1] Electric Vehicle Council (2022) *Electric Trucks: Keeping shelves stocked in a net zero world*, https://electricvehiclecouncil.com.au/electric-trucks-keeping-shelves-stocked-in-a-net-zero-world/
[2] Truck Industry Council (2019) *Modernising Australia's Truck Fleet Budget Submission 2019/20*, https://treasury.gov.au/sites/default/files/2019-03/360985-Truck-Industry-Council.pdf

Benefits beyond decarbonisation

The benefits of electrification go beyond carbon emission.

The electrification of road freight will also reduce dangerous air and noise pollution in Australian cities improving the health of millions of Australians including road transport workers.[3]

In addition, the shift from a road freight system dependent on 90% imported diesel to a fully electrified road freight system running on locally produced renewable energy will facilitate a step-change in Australia's fuel and supply chain security.[4]

Furthermore, the accelerated replacement of diesel trucks with electric trucks will create additional new jobs in Australia's existing trucking industry (including the trailer and body building industry) as well as acting as a catalyst for new industries across the battery value chain.

Industry needs pathway certainty

To date, there has been a high level of perceived uncertainty from within the transport industry as to the likely or preferred technology pathway for heavy transport (with a considerable level of "hope" that less advanced technologies will rapidly evolve and can be adopted on a "one for one" operational basis to diesel trucks). NewVolt believes this perception is unrealistic and unhelpful since it prevents and delays investment decisions being made today with technology available today and/or in the nearer term.

This Roadmap can serve as an important reference point to telegraph to industry the expected roles of different technologies over time. In this way, it can serve a similar purpose as AEMO's 'Integrated Systems Plan' (for energy generation) in terms of providing greater certainty that encourages corresponding operational and investment decisions across the industry.

Getting the policy settings right

While the benefits of electrification are immense, the transition will not happen in a manner or at a pace that optimises those benefits without strong government support.

The development of policies and a strategy specifically focussed on the electrification of heavy vehicles should be a priority for the Government.

[3] Queensland Trucking Association (2023) *Strategic Plan & Facts,* https://www.qta.com.au/strategic-plan-facts
[4] The Australia Institute (April 2022) *Over a barrel*, https://australiainstitute.org.au/wp-content/uploads/2022/04/P1036-Over-a-barrel_liquid-fuel-security-WEB.pdf

To capture the benefits that battery electric truck technology can bring to the Australian economy, the Australian government should focus on policy settings that:

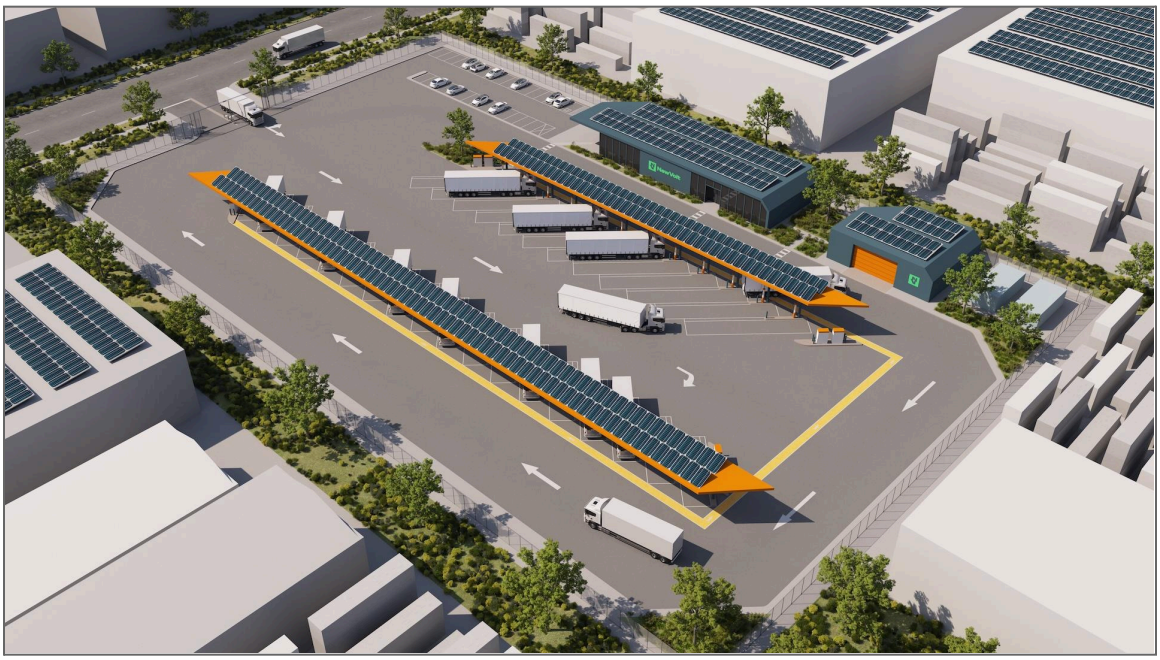
- Support the **rapid adoption** of zero emission heavy vehicles. As an immediate step, Australia should align itself to the ambition set out in the Global MOU on Zero Emission Heavy Vehicles and then, through both State and Commonwealth policies, consider how to achieve higher levels of uptake on a targeted basis such as in densely populated areas where the negative externalities of diesel trucks are highest (such as through low emissions zones and/or differential port access charges).

- Support policies that focus on carbon abatement (or diesel displacement) rather than simply (for example) subsidising the upfront capital cost of zero emission trucks. For example, tax rebates on the consumption of (renewable) electricity consumed for heavy freight would encourage adoption of electric trucks in a manner that delivers greater "bang for buck" in terms of emissions reduction.

- Recognise the **social equity** issues that are likely to arise from the transition to new technology, particularly amongst fleet operators many of which are small businesses with limited access to capital.[5] Equity issues should be considered upfront in policy to ensure a "fair transition" that will help maintain stakeholder support for what is necessary and will benefit the broader community.

- Ensure Australia gets access to the **best technology available** by making Australia an internationally relevant market with minimal barriers to deployment.

- Strategically consider how the adoption of electric trucks, at scale, can support **high value employment opportunities** in Australia, both directly and across complementary industries (such as the battery value chain). This will similarly encourage greater stakeholder support for a necessary transition.



[5] The challenges are explained well by NatRoad in 'Australian road freight transport decarbonisation': Industry White Paper, November 2023.

Summary

Key points:

- Decarbonisation of the road freight industry requires a sector specific solution distinct from policy settings applied to support decarbonisation of passenger vehicles.
- The best pathway for heavy vehicles for the vast majority of Australia's freight task is battery electric. The technology already exists and is getting better.
- Australia is uniquely positioned to benefit enormously from electrified road freight thanks to our low-cost renewable energy resources and concentrated freight networks.
- The transition to electrified road freight will reduce Australia's dependence on price-volatile imported fuels and facilitate a step-change in Australia's fuel and supply chain security.
- Lower cost freight through electrified trucking will result in economy-wide cost savings on domestically consumed goods and provide a competitive advantage to Australian exporters, particularly in the context of global carbon border tariffs, such as the EU's Carbon Border Adjustment Mechanism (CBAM)[6]
- The accelerated replacement of Australia's ageing diesel trucks, which have an average age of 15 years, with electric trucks will generate significant cuts to Australia's emissions whilst also supporting new jobs in Australia's trucking industry.
- Policies to address the equity issues that will otherwise arise during the transition, particularly for small fleet operators, need to be considered upfront (e.g. to help support low cost financing of zero emission trucks).
- Recognising that strategic alignment between high levels of electric truck uptake, and other industries, could result in additional jobs in new industries such as critical minerals refining, battery production, and battery recycling.
- Open access truck charging infrastructure is a critical enabler of the electrification of road freight. Providing clear market signals and sector specific targets, provides greater certainty for investment in such infrastructure.

[6] European Commission (2023) *Carbon Border Adjustment Mechanism* https://trade.ec.europa.eu/access-to-markets/en/news/carbon-border-adjustment-mechanism-cbam

Supporting Material

Why electrification of heavy vehicles matters

In addition to the benefits for health and emissions reduction, the transition to electrified trucking will, over time, reduce freight costs and facilitate a step-change in Australia's energy security, provided Australia gets the policy settings right.

Reducing emissions

In 2023 the Government requested the Climate Change Authority (CCA) review potential technology transition and emissions pathways for six key sectors including: electricity and energy, transport, industry and waste, agriculture and land, resources, and built environment.

Accounting for 38% of total transport sector emissions, the electrification of road freight presents the government with an opportunity to accelerate the decarbonisation of the transport sector.[7]

With the transport sector making up 19% of Australia's total emissions and the fact that zero emission alternatives are already available, the electrification of trucking has the potential to be a "heavy lifter" in enabling the government to achieve its net zero emissions targets.

Energy and supply chain security

Australia's economy relies on road freight and the road freight industry relies on 90% imported diesel. Australia's reliance on imported diesel, at a present cost of approximately $30 billion annually, makes the economy highly vulnerable to global oil price volatility and supply constraints.[8] Through the electrification of trucks, imported transport fuel can be replaced with locally sourced Australian made renewable energy, facilitating a step-change improvement in Australia's energy security.

While the International Energy Agency (IEA) guidelines require Australia to hold 90 days of 'net import' days of fuel, Australia only holds around 68 days worth and that based on 2022 consumption rates, this was expected to drop to just 32 days.[9]

As the Australia Institute has previously noted:

> *Previous government approaches to fuel security have focused on supply-side issues - rarely have demand-side solutions been considered. However, it is only through moving*

[7] Electric Vehicle Council (2022) *Electric Trucks: Keeping shelves stocked in a net zero world*, https://electricvehiclecouncil.com.au/electric-trucks-keeping-shelves-stocked-in-a-net-zero-world/
[8] Australian Petroleum Statistics (2023)
[9] The Australia Institute (April 2022) *Over a barrel*, https://australiainstitute.org.au/wp-content/uploads/2022/04/P1036-Over-a-barrel_liquid-fuel-security-WEB.pdf

> *to electric vehicles and increasing mode shift to public transport, cycling and walking that our reliance on imported fuel will decrease significantly. The sooner this happens, the more secure Australia will be.*[10]

In a world of increasing geopolitical tension and extreme weather events, the electrification, localisation, and decentralisation of Australia's transport energy supply chain should be a high priority to support energy security and resilience.

Health and wellbeing

The electrification of trucking presents an obvious, and now achievable, opportunity to dramatically improve the health and wellbeing of Australians living in major urban areas and working in the transport industry.

The adverse health impacts of exposure to diesel exhaust has been well documented both in Australia[11] and overseas.[12] As the Grattan Institute notes:

> *Truck exhaust pipes spew out fine particulate matter and nitrogen oxide, which cause asthma, coronary heart disease, strokes, bladder cancer, and type-2 diabetes. Children are particularly vulnerable to air pollution – including in the womb.*[13]

In this context, it is alarming but not surprising that suburbs adjacent to the Port of Melbourne (Australia's busiest container port), present an asthma rate 50% higher than the state average.

> *Maribyrnong's hospital admission rate is more than 70 per cent higher than the Australian average for people aged three to 19, and the inner west has a higher incidence of lung cancer than the general Australian population. The suburbs of Yarraville and Brooklyn are ranked seventh and eighth in Australia for their air pollution concentration.*

Battery electric truck technology means that Australia no longer needs to accept diesel pollution and its consequent health impacts as a fact of living in an urban environment.

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[10] The Australia Institute (April 2022) *Over a barrel*, https://australiainstitute.org.au/wp-content/uploads/2022/04/P1036-Over-a-barrel_liquid-fuel-security-WEB.pdf

[11] The University of Melbourne (2023) *Health impacts associated with traffic emissions in Australia*. https://www.unimelb.edu.au/__data/assets/pdf_file/0007/4502923/Expert-Position-Statement_Vehicle-emissions_FINAL.pdf

[12] Gawryluk, Palombo, Curran, Parker, Calsten (2023) *Brief diesel exhaust exposure acutely impairs functional brain connectivity in humans: a randomized controlled crossover study*, https://ehjournal.biomedcentral.com/articles/10.1186/s12940-023-00961-4

[13] Grattan Institute (2023) *Truck Pollution Kills*, https://grattan.edu.au/news/truck-pollution-kills/

Why Australia should go faster

The adoption of electric trucks in Australia has already begun and is gathering pace.[14] The Government is supporting the industry to begin adopting this technology including, notably, through ARENA's *Driving the Nation* Program. This support is welcome.

However, Australia's uptake is lagging other markets.[15] It is in Australia's interest to go faster.

Global MOU on zero-emission trucks

The *Global Commercial Vehicle Drive to Zero Memorandum of Understanding* now has 33 signatory nations. Australia should add its signature to the list.

Under the *Memorandum of Understanding (MOU) on Zero-Emission Medium- and Heavy-Duty Vehicles*, leading countries commit to working together to enable 100% zero-emission new truck and bus sales by 2040 with an interim goal of 30% zero-emission vehicle sales by 2030, to facilitate achievement of net-zero carbon emissions by 2050.[16]

By committing to this MOU, Australia is sending a clear market signal to the industry in Australia and to the relevant international stakeholders including vehicle and charging technology OEMs, that there will be significant levels of demand that make Australia strategically relevant. In turn, this will drive better access to technology at significantly lower cost and it will encourage private sector investment in truck charging infrastructure..

Beyond the targets set in this MOU, greater ambition should be pursued through more segmented targets that deliver the greatest 'bang for buck' in terms of reducing emissions, improving health and deploying technology where the economics are most compelling.

[14] The Driven (2024) *"A game changer:" Albanese hails delivery of biggest electric truck fleet in Australia,* https://thedriven.io/2024/03/14/a-game-changer-albanese-hails-delivery-of-biggest-electric-truck-fleet-in-australia/
[15] ICCT (2024) Race to Zero European Heavy Duty Vehicle Market, https://theicct.org/publication/race-to-zero-eu-hdv-market-development-q4-2023-mar24/
[16] Global Commercial Vehicle Drive to Zero (2024) *Global Memorandum of Understanding on Zero-Emission Medium- and Heavy-duty vehicles,* https://globaldrivetozero.org/mou-nations/

Economy-wide cost savings through low-cost renewable energy

The fuel savings on offer for the freight sector through the electrification of trucking are significant and will result in substantial economy-wide cost reductions.

The total cost of ownership (TCO) of battery electric trucks is already strong across many duty cycles driven by lower fuel costs.[17] That TCO is expected to significantly improve in coming years as upfront costs reduce and residual values improve.

The TCO benefits of electric trucks in Australia should be even better than in other markets. In particular, Australia has a unique comparative advantage in its ability to access low cost renewable energy and to deploy distributed energy resources specifically.[18]

The cost savings of powering freight with renewable energy will further improve over time as renewable energy costs continue to decline.

Optimising the benefits of Australia's low cost renewable energy does require continued progress on engineering solutions, commercial innovation and behavioural changes including shifts in how and when we use electricity. But that progress is inevitable given the economic incentive for doing so.

Carbon border tariffs

The introduction of carbon border tariffs such as the EU's Carbon Border Adjustment Mechanism (CBAM) can be either a barrier or an opportunity for Australia exporters.

In a world moving towards carbon border tariffs, Australia's low-cost renewable energy coupled with electrified road freight, provides Australian exporters with a potential competitive advantage compared to exporters in countries where decarbonisation is more difficult and expensive. If Australia supports the deployment of low cost zero emission road freight, it will represent an economic benefit for exporters.

Australian truck manufacturing industry set to benefit from transition to electric

A key feature of the Australian trucking industry is the role played by secondary manufacturers to modify trucks to local requirements including fitting the truck with the equipment required by the freight operator. The diverse applications involved in trucking have therefore resulted in a significant local industry.

> *Ninety-five per cent of trucks sold, upwards of 25,000 vehicles each year, require this secondary manufacturing process. As such, there are hundreds of second-stage manufacturing companies, from major trailer manufacturers, tipper and tanker*

[17] ICCT (2023) *A total cost of ownership comparison of truck decarbonization pathways in Europe*, https://theicct.org/publication/total-cost-ownership-trucks-europe-nov23/

[18] CSIRO (2023) *GenCost Annual insights into the cost of future electricity generation in Australia*, https://www.csiro.au/en/research/technology-space/energy/energy-data-modelling/gencost

> *builders to the smaller companies making everything from specialist bodies, hydraulics for tippers and garbage collectors, cabins, fuel tanks, chassis frames, electrical harnesses, wheel guards and turntables.*[19]

As noted by the Truck Industry Council, truck manufacturers and importers in Australia are major employers of skilled people in trades, engineering, electronics, and information technology with a total workforce of approximately 36,000 in 2019.

A higher demand for electric trucks in Australia, given the scale of the transport industry, is very likely to create additional jobs in critical minerals refining, battery production, and battery recycling.

The electrification of trucks is already seeding a new manufacturing industry in Australia. Last year Volvo announced its plans to assemble all-electric trucks at its Wacol factory in Queensland in 2027.[20] Furthermore, based in Victoria, SEA Electric is manufacturing fully electric drivetrains and assembling rigid electric trucks for a range of applications including refrigerated freight, earthmoving tip trucks and last-mile delivery trucks.[21]

Australia faces global competition for technology and capital

Supply and production constraints are currently limiting the pace of the global transition to electrified transport. It is critical that Australia does not join the end of the queue.

In the global passenger vehicle market, Australia is already suffering after the failure of previous governments to introduce vehicle emissions standards. This failure has effectively turned Australia into a dumping ground for inefficient, highly polluting vehicles as manufacturers direct limited supplies of EVs to countries with much stronger emissions penalties.

Australia cannot risk this happening again with the trucking sector and must urgently implement policies that make Australia an attractive market for OEMs (for both truck and charging equipment).

Attracting OEMs to view Australia as a viable long-term market for electric trucks requires a strong commitment from Governments including sector specific targets (for zero emission truck uptake and emissions reduction) supported by policies to achieve those targets.

The electric truck market has already reached Australian roads. It is critical that policies are implemented to ensure Australia does not pay more and take longer to achieve a transition that will overwhelmingly benefit Australian society.

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[19] Truck Industry Council (2019) *National Truck Plan - Modernising Australia's Truck Fleet (P8)*
[20] The Driven (2023) *Volvo to start making electric trucks at Australia's biggest vehicle factory in 2027*, https://thedriven.io/2023/02/14/volvo-to-start-making-electric-trucks-at-australias-biggest-vehicle-factory-in-2027/
[21] SEA Electric (2024) *SAE Electric Australia*, https://www.sea-electric.com/en_au/

Infrastructure is the enabler

Dedicated Truck charging infrastructure is needed

NewVolt believes that a fast-charging network dedicated to electric trucks covering Australia's major road freight routes and at critical transport nodes is a necessary activator for the industry transition.

The development of charging infrastructure, together with other supportive policies, will give OEMs (original equipment manufacturers) the confidence to bring electric models to the Australian market and to give freight operators the confidence to invest in electric alternatives.

NewVolt is developing that network.

Government can support the investment and deployment of such infrastructure through policy settings that show a clear intention to support uptake of electrified road freight over the short, medium and long term.

Conclusion

Thank you for the opportunity to contribute to the Roadmap. NewVolt looks forward to making further contributions to the policy debate in the future.

Keep on (electric) trucking!

References

1. Electric Vehicle Council (2022) *Electric Trucks: Keeping shelves stocked in a net zero world*, https://electricvehiclecouncil.com.au/electric-trucks-keeping-shelves-stocked-in-a-net-zero-world/
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5. European Commission (2023) *Carbon Border Adjustment Mechanism* https://trade.ec.europa.eu/access-to-markets/en/news/carbon-border-adjustment-mechanism-cba
6. NatRoad in 'Australian road freight transport decarbonisation': Industry White Paper, November 2023.
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9. Gawryluk, Palombo, Curran, Parker, Calsten (2023) *Brief diesel exhaust exposure acutely impairs functional brain connectivity in humans: a randomized controlled crossover study*, https://ehjournal.biomedcentral.com/articles/10.1186/s12940-023-00961-4
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