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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1 Confirm that you have read and understand this privacy notice.
Yes

2 Please indicate how and if you want your submission published.
Public

3 Published name
Veolia

4 Confirm that you have read and understand this declaration.
Yes

5 First name
Miriam

6 Last name
Cumming

7 Email
[redacted]

8 Phone

[redacted]

9 Who are you answering on behalf of?

Organisation

10 Organisation name

Veolia

11 What best describes you or your organisation?

Industry

12 What sector do you represent?

Heavy road vehicles (trucks, buses etc.)

13 What state or territory do you live in?

New South Wales

14 Postcode

Not answered

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?

Veolia agrees that electrification represents a primary decarbonisation pathway for road vehicles.
The transition to electric vehicles (EVs) represents a significant opportunity for Australia to reduce
greenhouse gas emissions, improve air quality, and enhance energy security. It is now crucial to
ramp up investment in the resources, systems, and infrastructure to support this transition.

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?

In public procurement, decision-makers often favour cheaper capital cost over climate considerations, making it essential the government introduce appropriate incentives that reduce the
upfront cost of EVs. To drive up heavy vehicle uptake by Australian businesses, the Electric Vehicle
Council recommends the following financial incentives:
 Governments should provide an incentive payment to reduce the upfront purchase cost of EVs. Increased scale, sales, and model availability is needed to bring down costs to make electric heavy vehicles a commercial choice for Australian businesses. A purchase price incentive signals to heavy vehicle manufacturers that there is demand in the market.
 State and territory governments should exempt electric heavy vehicles from stamp duty. Stamp duty currently discourages operators from investing in new heavy vehicles, because it adds a cost burden on the operator at the time of purchase. Note, that stamp duty
exemptions would not change the need for a purchase price incentive as the level of stamp
duty per truck is significantly less than the higher upfront cost of an electric truck.

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?

The utilisation of EV fleets as virtual batteries presents a unique opportunity for local authorities to
optimise charging locations and address fluctuations in energy demand. Waste collection vehicles
are particularly well-suited for vehicle-to-grid technology as their batteries are six times larger than
those found in an average car. Additionally, these fleets are typically parked during peak energy
consumption times, making them an ideal candidate for utilising stored energy.

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?

Australia should join the ever-growing list of countries across Europe, Asia and the United States
that are imposing ambitious rates for Li-ion battery recycling and metals recovery. European
legislators have proposed new regulation mandating inclusion of recycled raw materials in the
production of new batteries:
- 2025: mandatory declaration of the percentage of recycled content
- 2031: 16% for cobalt, 6% for lithium and nickel
- 2036: 26% for cobalt, 12% for lithium and 15% for nickel.

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

Veolia_submission_Transport_and_Infrastructure_Net_Zero_Roadmap.c5bb8d1f_Redacted.pdf

69 Upload a submission

Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered

Transport and Infrastructure Net Zero Roadmap

26 Jul 2024

Department of Climate Change, Energy, Environment and Water
Via submission portal at https://www.infrastructure.gov.au/have-your-say/transport-and-infrastructure-net-zero-consultation-roadmap

Re: Transport and Infrastructure Net Zero Consultation Roadmap

Veolia is a global leader in water, waste and energy management. The group has close to 220,000 employees worldwide, including 6,500 employees in Australia and New Zealand. Our solutions contribute to the sustainable development of communities and industries. Through our three complementary business activities, Veolia helps to develop access to resources, to preserve available resources, and to replenish them.

Veolia supports the opportunity to decarbonise transport and contribute to Australia's goal of reaching net zero by 2050 via the *Transport and Infrastructure Net Zero Roadmap and Action Plan.* Our comments relate to road transport (chapter 3.1 and 3.2 of the Roadmap).

Veolia agrees that electrification represents a primary decarbonisation pathway for road vehicles. The transition to electric vehicles (EVs) represents a significant opportunity for Australia to reduce greenhouse gas emissions, improve air quality, and enhance energy security. It is now crucial to ramp up investment in the resources, systems, and infrastructure to support this transition.

Veolia is also a leader in electric vehicle battery recycling in Europe – and with good government policy, there is no reason we can't build a sustainable battery recycling industry here in Australia.

1. Key barriers to electric vehicle transition

Veolia will continue to accelerate the transition of our 2,700-strong fleet to electric vehicles in Australia. However, in this task we face challenges that are not unique to our company and have been outlined by the Electric Vehicle Council[1]:

[1] Electric Vehicle Council (2022). State of Electric Vehicles

- **Limited charging infrastructure and large-scale introduction of EVs could drive up energy prices and overload the grid.** Significant changes are required to the Australian energy system, including behavioural shifts to encourage off-peak charging and longer-term, centralised orchestration of EV charging. Such challenges also represent an opportunity for sustainable charging solutions. For example, Veolia can explore utilising solar panels or green power plants at our operational sites to charge our utes. And with site-based utes predominantly charged overnight, we can take advantage of off-peak power. A good case study is BP's collaboration with the Royal Mail and five other leading businesses in the UK, which saw chargers installed at depots for their electric fleets.

- **Limited availability of electric vehicles** particularly for utility vehicles, in large part due to the absence of a fuel efficiency standard and nationally consistent EV policy. Veolia's fleet includes 750 utes. At present there is only one electric ute available in the Australian market (LDV Et60) and it is not fit for our purposes.

- **No nationally consistent eligibility rules.** Differing rules across incentive programs in Australia are leading to confusion and reducing the overall potential effectiveness of well-intentioned policy actions.

2. Heavy vehicles: electric garbage trucks

Heavy vehicles account for 23% of all road transport fuel consumed in Australia, with heavy vehicle diesel fuel consumption predicted to grow by 56% between 2016 and 2040.[2] However, if Australia were to electrify articulated and rigid trucks it could save the country $324.8 billion by 2050, avoiding or reducing the greenhouse gas emissions and air and noise pollution.

Electrifying Veolia's fleet of heavy vehicles faces additional barriers to those outlined in the section above:

- **Suitability for Australian road infrastructure due to higher axle load/payload:** Independent experts need to assess the impact of electric vehicles on roads, bridges, and other infrastructure. Unfortunately, the government provides little support to suppliers in this regard with added costs passed on to end consumers, driving up the overall price of electric vehicles.

- **Australian Design Rules compliance:** Most electric trucks on the market are not compliant with Australian Design Rules. This means that additional approvals and modifications are

[2] The Department of Infrastructure, Transport, Regional Development and Communications (2020). Heavy Vehicle Emissions Standards for Cleaner Air.

required to meet the necessary standards. These extra steps result in barriers to entry or increased costs for manufacturers and, subsequently, for consumers.

- **Limited OEM options:** We are missing a robust innovation pipeline from global OEMs when it comes to electric trucks. This means that there are few options available for consumers who are looking to transition to electric vehicles. The limited choices can hinder the adoption of electric trucks in Australia and slow down the overall transition process.

A new combustion-heavy vehicle costs $300,000, while its electric counterpart costs around $800,000. Costs are also subject to the body attached and the standard price of a truck chassis is $200,000 with the price of an EV approximately three times this. However, it should be noted that this price differential does not reflect that electric vehicles have far lower maintenance costs, making the full lifetime costs of an EV close to or on par with a combustion vehicle.

In public procurement, decision-makers often favour cheaper capital cost over climate considerations, making it essential the government introduce appropriate incentives that reduce the upfront cost of EVs. To drive up heavy vehicle uptake by Australian businesses, the Electric Vehicle Council recommends the following financial incentives:

- **Governments should provide an incentive payment to reduce the upfront purchase cost of EVs.** Increased scale, sales, and model availability is needed to bring down costs to make electric heavy vehicles a commercial choice for Australian businesses. A purchase price incentive signals to heavy vehicle manufacturers that there is demand in the market.

- **State and territory governments should exempt electric heavy vehicles from stamp duty.** Stamp duty currently discourages operators from investing in new heavy vehicles, because it adds a cost burden on the operator at the time of purchase. Note, that stamp duty exemptions would not change the need for a purchase price incentive as the level of stamp duty per truck is significantly less than the higher upfront cost of an electric truck.

3. Virtual batteries and a green grid

The utilisation of EV fleets as virtual batteries presents a unique opportunity for local authorities to optimise charging locations and address fluctuations in energy demand. Waste collection vehicles are particularly well-suited for vehicle-to-grid technology as their batteries are six times larger than those found in an average car. Additionally, these fleets are typically parked during peak energy consumption times, making them an ideal candidate for utilising stored energy.

Veolia can play an active role in solving logistical issues around charging locations, and installing charging infrastructure to match demand. Veolia has already rolled out EV charging stations at three

of our facilities in Queensland and there are plans for 20 more charging stations nationally in 2024. All of these sites will be linked to a monitoring system to determine where further energy efficiencies can be found. And these benefits don't just stay with Veolia – chargers installed on some sites are available for public use.

The makeup of renewable energy powering the grid in each state and territory is a vital factor in the transition to EVs and the goal of reducing emissions.

4. Repair, re-use and recycling of electric vehicle batteries

Electric vehicle batteries weigh an average of 300 kg but can be up to twice that for some models. They are composed of plastics, solvents, electronic compounds and small quantities of high-value metals such as lithium, cobalt, copper, manganese and nickel. This makes them good candidates for repair and re-use, in line with the waste hierarchy.

With anticipated growth of EVs, once repair and re-use options are optimised, battery recycling is a necessity to limit the demand pressure on certain metals and to conserve our natural resources. Recovering metals in end-of-life batteries is also an economic opportunity. According to the Future Battery Industries CRC, Australia could see half a billion dollars in added GDP from the re-use and recycling of batteries, as part of a thriving domestic battery industry worth $16.9 billion in gross value added and adding 61,400 jobs by 2030.[3]

In Europe, Veolia is actively working to solve pressing issues regarding the management of end-of-life batteries: eco-design of EV batteries to facilitate reuse and recycling, battery second-life activities to facilitate electrical network flexibility, storage for renewables integration and EV charging stations, and battery recycling.

Australia should join the ever-growing list of countries across Europe, Asia and the United States that are imposing ambitious rates for Li-ion battery recycling and metals recovery. European legislators have proposed new regulation mandating inclusion of recycled raw materials in the production of new batteries:

- 2025: mandatory declaration of the percentage of recycled content
- 2031: 16% for cobalt, 6% for lithium and nickel
- 2036: 26% for cobalt, 12% for lithium and 15% for nickel.

European institutions also aim to define how efficient the recycling process is, and therefore the yield from the processes used, with new mandatory targets:

[3] Future Battery Institute CRC, Charging Ahead Australia's battery powered future

- 2027: 90% for cobalt, copper and nickel, 50% for lithium
- 2031: 95% for cobalt, copper and nickel, 80% for lithium

Thank you again for the opportunity to provide feedback on this Roadmap. If you require further information, please contact [redacted] [redacted] Veolia's Policy Advisor at [redacted].

Yours faithfully,

[redacted]

RICHARD KIRKMAN
Chief Executive Officer & Managing Director

About Richard Kirkman

Dr Richard Kirkman has been CEO of Veolia Australia and New Zealand since 2020, having worked in energy and waste management for over 30 years. He is an engineer and a Board Member of the National Waste & Recycling Industry Council. In Richard's previous position at Veolia UK, he oversaw major waste infrastructure development and completed a PhD on *Infrastructure for the Circular Economy: The Role of Policy in System Change* at Imperial College London. In the UK he was a founding member of The Department for Environment, Food and Rural Affairs (DEFRA) Council for Sustainable Business, a member of Board of the UK Plastics Pact, and Commissioner for the Green Innovation Policy Commission.