

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

Rewiring Australia

4 Confirm that you have read and understand this declaration.

Yes

5 First name

John

6 Last name

Buchelin

7 Email

[REDACTED]

- 8 Phone
[REDACTED]
- 9 Who are you answering on behalf of?
Organisation
- 10 Organisation name
Rewiring Australia
- 11 What best describes you or your organisation?
Not for profit
- 12 What sector do you represent?
Light road vehicles (cars, utes etc.)
Energy
Climate change/net zero
- 13 What state or territory do you live in?
New South Wales
- 14 Postcode
2515
- 15 What area best describes where you live?
Regional area
- 16 1. Do you support the proposed guiding principles?
Yes
- 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?

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?

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?

No

27 7.1 Please add details to your response.

Vehicles last about 20 years before they are replaced. This makes the net zero calculation simple: all new vehicle purchases will need to be zero emission by 2030 if we are to meet our 2050 zero emission commitments. The current proposals are neither ambitious nor timely enough to meet these emissions targets.

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?

1. The integration of electric vehicles as critical energy infrastructure into our national electricity market and acceleration of vehicle-to-grid (V2G) development and deployment.

2. Focus on policies that incentivise the vehicles that drive the most to switch first. This could be direct incentives and discounts offered to individuals based on their odometer readings at registration renewal, or other mechanisms to target users identified as likely to have higher mileage.

3. Support the proactive rollout of EV charging into lower socio-economic areas. If EV charging 'follows' EV uptake and demand, it will be concentrated in wealthier areas and accentuate unequal access.

4. Increase in investment in workplace and community EV charging powered by community generation - this will support a renewable grid by shifting demand into the middle of the day.

5. Curb the trend to supersize vehicles by removing the tax-based policies for light commercial and heavy vehicles and replaced with a weight-based fee model.

6. For Every Australian household (especially low income) and small business to have access to comprehensive support measures to electrify their cars, such as Income

Contingent Loans to afford EVs.

7. Creation of a national Office of Electrification to deliver programs such as a broad-scale electrification finance scheme - the office would ensure that disadvantaged households and communities are among the first to receive electrification upgrades.

8. The new Office of Electrification can also deliver public education and thought leadership to give communities the tools they need to understand the health, economic and environmental benefits of electrification and make informed decisions about their next purchase of vehicle, appliance or home.

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?
Instead of focusing on percentage of vehicles sold by type, we should be measuring the number of kilometres travelled by type - eg. petrol, battery electric.

- 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?

The Inflation Reduction Act (IRA) of 2022, United States of America. Rewiring Australia would be happy to provide details and insights on this legislation, the success and the learnings.

- 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?

Yes

66 Would you like to upload a document?

Yes

67 Have you removed any identifying information from your submission?

Yes

68 Upload a submission

Rewiring Australia Submission - Transport and Infrastructure Roadmap - August 2024.pdf

69 Upload a submission

Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered



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Transport and Infrastructure Net Zero Consultation Roadmap

Overview

Rewiring Australia supports the introduction of The Transport and Infrastructure Net Zero Roadmap and Action Plan. The faster we can transition our fossil fuel powered vehicles into efficient, electric alternatives run on renewable energy, the faster we can reduce our national carbon emissions and improve cost of living and health outcomes for every Australian. Rewiring Australia advocates for electric vehicles to be recognised as critical energy infrastructure, incentivising the vehicles that drive the most to switch first, proactive rollout of EV charging into lower socio-economic areas, community EV charging and energy generation and for every Australian household and small businesses to have access to comprehensive support measures to electrify their cars. As outlined in our [pre-budget submission in March 2024](#), this work should be overseen by an Office of Electrification to build momentum around electrification policy development and implementation.

About Rewiring Australia

Rewiring Australia is a non-profit research and advocacy organisation dedicated to representing the people, households and communities in the energy system. We deliver practical climate progress by working with government, industry, and communities to electrify everything. Co-founded in 2021 by Dr Saul Griffith and Dan Cass, Rewiring Australia highlights the positive climate and economic outcomes possible for Australia, and the world, with electrification of fossil fuel machines. www.rewiringaustralia.org

In addition to co-founding Rewiring Australia, Saul Griffith is also the co-founder and Chief Scientist of Rewiring America. Rewiring America and Saul worked closely with the Biden Administration in the drafting of the Inflation Reduction Act to drive investment in clean electric machines and in supporting households and the larger U.S. economy to electrify. www.rewiringamerica.org

Key Statistics

- Filling the “tank” of an average car to drive 500km, costs about \$82. In comparison, charging an electric car to drive the equivalent kilometres is about \$32 or with rooftop solar can be around \$5¹.
- About 45% of an electricity bill² is due to the ‘poles and wires’ network costs, and this share is likely to increase over time. Adopting EVs can reduce these network costs. They offer the potential for highly flexible demand and supply that’s close to rooftop solar generation and residential and commercial demand, reducing the need for new distribution infrastructure, and maximising the utilisation of the existing capacity.
- As the passenger vehicle fleet moves towards fully electric vehicles, their combined storage capacity will be about five times the storage capacity of Snowy Hydro 2.0.
- Australia has over 19 million passenger cars and utes which will cost approximately over \$1t to replace, however 50% of the kms travelled are from 20% of the cars³, this means to electrify half of the cars driving on the road today, we only need to do the busiest 4 million of them.
- If we incentivised only this \$200b of cars and utes with generous 20% incentives, we’d tackle half the car and ute emissions for just \$40b.
- Australia also has over 850,000 trucks and buses too and the top 20% do approximately 60% of the kms³, so even more opportunity to prioritise investments in this sector.
- Reliance on fossil fuels for transport is increasing inflation, July 2024 inflation figure increased to 3.8%, and automotive fuel is 3.6% of the CPI basket of goods.
- Australia is the third most sparsely populated country in the world⁴, and has the third most kilometres of road per person⁵. Moving broadly to transport

¹Petrol price data sourced from Australian Institute of Petroleum, August 2024 Report. Rooftop Solar price sourced from Rewiring Australia, Castles and Cars Technical Study, 2021, page 84, <https://www.rewiringaustralia.org/report/castles-cars-technical-study>

² Australian Competition & Consumer Commission, Cost of supplying electricity to households at an eight-year low, 13 December 2021, <https://www.accc.gov.au/media-release/cost-of-supplying-electricity-to-households-at-an-eight-year-low>

³ Bureau of Infrastructure and Transport Research Economics, Who’s using the roads: variations in usage by drivers, 2014, page 4 https://www.bitre.gov.au/sites/default/files/is_053.pdf

⁴ List of countries and dependencies by population density, August 2024, https://en.wikipedia.org/wiki/List_of_countries_and_dependencies_by_population_density

⁵ NationalMaster, <https://www.nationmaster.com/country-info/stats/Transport/Highways/Total/Per-capita>

technologies with much lower running costs will be an important structural productivity enhancement for our country.

Recommendations

- The integration of electric vehicles as critical energy infrastructure into our national electricity market and acceleration of vehicle-to-grid (V2G) development and deployment.
- Focus on policies that incentivise the vehicles that drive the most to switch first. This could be direct incentives and discounts offered to individuals based on their odometer readings at registration renewal, or other mechanisms to target users identified as likely to have higher mileage.
- Support the proactive rollout of EV charging into lower socio-economic areas. If EV charging 'follows' EV uptake and demand, it will be concentrated in wealthier areas and accentuate unequal access.
- Increase in investment in workplace and community EV charging powered by community generation - this will support a renewable grid by shifting demand into the middle of the day.
- Curb the trend to supersize vehicles by removing the tax-based policies for light commercial and heavy vehicles and replacing them with a weight-based fee model.
- For Every Australian household (especially low income) and small business to have access to comprehensive support measures to electrify their cars, such as Income Contingent Loans.
- Creation of a national Office of Electrification to deliver programs such as a broad-scale electrification finance scheme - the office would ensure that disadvantaged households and communities are among the first to receive electrification upgrades.
- The new Office of Electrification can also deliver public education and thought leadership to give communities the tools they need to understand the health, economic and environmental benefits of electrification and make informed decisions about their next purchase of vehicle, appliance or home.

Conclusion

Vehicles last about 20 years before they are replaced. This makes the net zero calculation simple: all new vehicle purchases will need to be zero emission by 2030 if we are to meet our 2050 zero emission commitments. The current proposals are neither

ambitious nor timely enough to meet these emissions targets and they must be supported with a range of other complementary policies and incentives to realise the benefits of having zero emissions vehicles accessible for every Australian.