Transport and Infrastructure Net Zero Consultation Roadmap

Take the survey

Department of Climate Change, Energy, Environment and Water

Response received at:
August 6, 2024 at 12:43 PM GMT+10

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sbm2fbb6a6c289c4c8434709

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
University of Canberra Culture and Heritage

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

5 First name
Alison

6 Last name
Wain

7 Email
[redacted]

8 Phone

[redacted]

9 Who are you answering on behalf of?

Organisation

10 Organisation name

University of Canberra

11 What best describes you or your organisation?

University

12 What sector do you represent?

Other: "Machinery heritage"

13 What state or territory do you live in?

New South Wales

14 Postcode

2621

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?

I am concerned that operating heritage transport machinery should be included in the framework, and have uploaded a document outlining research showing that this is an important area for consideration.

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?

Tenders for freight contracts have traditionally been won on price. The hidden costs of fossil fuel use need to be externalised in this process, so that lower carbon options can compete on a level playing field.

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

This would allow lower carbon and more efficient options for freight movement, such as train freight, to replace road transport for bulk goods.

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?

For EV use the government must supply a comprehensive network of recharging points for users who do not have off-road recharging facilities. If you are a parent trying to put dinner on the table you cannot leave your children to go and recharge your car for 45 minutes at a centralised charing point. You need to be able to plug your car in to charge outside your house or at the end of the block. There also needs to be enough street charging points that you do not have to drive around searching for one for 45 minutes before you can even start charging, there needs to be standardisation of plug types so that anyone can plug in and charge at any point, and there needs to be a centralised single charge app or credit card tap on/off facility (as for city public transport such as trams, trains and buses).

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

These actions would reduce stress and inconvenience that is currently driving people away from using EVs.

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

Yes

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.

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

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

LCLF are a drop in replacement option for liquid fossil fuels, so the embodied energy and cost of the existing distribution networks and vehicles can be taken advantage of. Batteries should come third due to the high environmental costs of mining the rare earth minerals required, and the high cost of battery replacement and disposal.

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

See above.

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?

Yes

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.

1: Low carbon liquid fuels

2: Hydrogen fuel cell
3: Battery electric

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

LCLFs are a drop in replacement option for liquid fossil fuels, so the embodied energy and cost of the existing distribution networks and vehicles can be taken advantage of. Batteries should come third due to the high environmental costs of mining the rare earth minerals required, and the high cost of battery replacement and disposal.

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

LCLFs are a drop in replacement option for liquid fossil fuels, so the embodied energy and cost of the existing distribution networks and vehicles can be taken advantage of.

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?

Yes

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?

Yes

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?

Yes

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

Wain Submission to Transport and Infrastructure Net Zero Consultation Roadmap_ University of Canberra.docx

69 Upload a submission

Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered

Submission to Transport and Infrastructure Net Zero Consultation Roadmap

Dr Alison Wain,
Associate Professor in Culture and Heritage
University of Canberra

This submission addresses the potential impact of fossils fuel phase down on the tangible and intangible heritage of domestic, public, agricultural, maritime and industrial transport machinery. This concerns both point to point transport heritage and also machines that transport material during construction and other functional activities, such as bulldozers, steam traction engines, harvesters, and in maritime industries such as fishing.

Transport heritage is a vital contributor to Australia's healthy society. It contributes to:

- Well-being –particularly important to older male demographics, being a source of social connection, and intellectual and physical activity;
- Intergenerational connection –running old machinery brings family members together, and events featuring working machinery are a huge drawcard for families;
- Tourism and other economic activities – car rallies, machinery museums, steam and machinery days provide vital income to many small communities, often in regional and low socio-economic areas. Recent estimates show that operating heritage machinery contributes around $3 billion per year to Australia's economy.
- Telling the story of the fossil fuel age – the disadvantages of fossil fuel power are very clear to younger generations when they can smell the smoke, get the soot on their hands and the cinders in their eyes.

I am working with heritage machinery sector group Operating Heritage Australia to survey the attitudes of this sector to fossil fuel use. We are surveying private owners, community groups, small and volunteer-run museums and state and national museums, asking them:

- what fossil-based fuels they currently use and how much per annum;
- what fossil carbon replacement options are currently available, or on the horizon, that might be suitable for operating heritage use; and
- how they plan to cope if these fuels and lubricants become harder to find, more expensive, or unavailable in their region.

We hope that low carbon liquid fuels may work for many heritage vehicles and will talk to emerging producers in this area about potential markets for products that are compatible with older combustion engines.

We also hope that the survey will initiate positive discussions about climate change adaptation by asking people to consider the practicalities of maintaining old things that they love. We hope our work will:

- Make discussing solutions to climate change a practical challenge, not an argument about politics;
- Raise ideas about change possibilities that can help with decisions about other parts of life.