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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Layla

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Humphreys

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9 Who are you answering on behalf of?

Organisation

10 Organisation name

Climate and Health Alliance

11 What best describes you or your organisation?

Not for profit

12 What sector do you represent?

Climate change/net zero

13 What state or territory do you live in?

Victoria

14 Postcode

3000

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.

We support avoid-shift-improve as the framework to decarbonise the transport sector, however we wish to emphasise the importance of utilising all three methods of abatement
for a healthy and just transition. As the Roadmap stands, it currently prioritises improving technological solutions to decarbonise over the avoidance of unnecessary travel, and mode

shift towards more sustainable modes of transporting people and goods, such as shared and
active transport.
New modelling suggests that by utilising a diverse suite of solutions, which incorporate 'avoid' and 'shift' interventions alongside 'improve' technologies, the transport sector benefits from more decarbonisation solutions.
Prioritising abatement through avoid and shift alongside improve interventions is a win-win
for climate and health. By taking advantage of diverse solutions, we are able to make use of
existing transport networks reducing the emissions associated with building new infrastructure, while also realising the health co-benefits of healthy and active transport. These benefits include a meaningful increase in physical activity levels, significantly reduced
risks of premature mortality and morbidity from obesity, cardiovascular disease, type 2 diabetes, dementia, ischaemic heart disease, cerebrovascular disease, osteoporosis, cancers, and other non-communicable diseases associated with inactive lifestyles.
We were pleased to see the commitment in the 2024-25 Federal Budget to invest $100 million into active transport, however this pales in comparison to the billions of dollars which
will be invested into LCLFs through the Future Made in Australia Innovation Fund. While CAHA welcomes the investment into renewable energy through A Future Made in Australia,
we would like to see significant investment into improving active and shared transport infrastructure alongside new technologies.

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.

The development of a national policy framework for shared and active transport would support emissions reductions and provide an informed pathway for states and territories to progress their own plans. The Climate and Health Alliance fully supports and encourages its development.

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

A national policy framework should set standards for transport infrastructure and urban planning which centre moving people and promote healthy transport choices, rather than accommodating cars and motor vehicles.

The policy framework should, for example, emphasise the need to 'avoid' activity that impacts human health and redirect resources from projects which promote personal light vehicle use to those which encourage the uptake of healthy transport choices.

At CAHA's 2023 Transport Roundtable, improvements to safety and accessibility were identified as a priority for promoting uptake of public and shared transport. Increased police presence at stations, separating tram lines from traffic, and policies which set out expectations for travel times would help to mitigate these concerns. CAHA supports the inclusion of a policy within the framework which would address expectations for travel times such as a Shared Transport Service Standard, as recommended by the Climate Council, which suggests public transport services operate at least every 15 minutes from 7am to 7pm within 800 metres of every home in Australia's eight capital cities. Perceived danger is also a key barrier to cycling, which can be overcome by the development of separated and safe cycling infrastructure. Barriers to uptake around safety and accessibility as above should be addressed in the framework.

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?

There is also a need for more public awareness and buy-in to shift from high use of personal

transport to public and active transport options. An attitude shift and subsequent uptake should be supported through government-funded awareness campaigns, incentives and/or
tax concessions. Congestion charges to mitigate traffic-related air pollution have been successful in London and other European countries, alongside charges for diesel-fuelled vehicles driven in the city, and planning of suburban areas which promote 'low-traffic neighbourhoods'. The implementation of congestion charges such as these could help to facilitate a shift in Australia from car-centric cities to more shared and active modes of transport.
A shift towards shared and active transport is good for social connection, health and the environment.

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?

Health can play an important role in influencing National Freight and Supply Chains given the
current demand for disposable medical equipment currently imported and distributed across
Australia. The health sector accounts for 7% of Australia's emissions, and of that percentage
70% can be attributed to supply chain impacts. The Australian Government's commitment to
decarbonise health supply chains and improve value of care (aligned with resource use) is outlined in the National Health and Climate Strategy.

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

Procurement policy can drive supply chain innovation and change to transport needs through requiring market providers to find and enable better solutions.

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.

As outlined in the roadmap, light road vehicles account for almost 60% of all transport emissions. A significant portion of light vehicle emissions can be attributed to personal passenger vehicles, which outnumber the number of licensed drivers on Australian roads. For these reasons, focussing on decarbonising and shifting modes of personal transport away from light road vehicles which rely on combustion engines provides a large opportunity
for emissions reductions.
The Roadmap has identified electric vehicles as the key to the net zero pathway for light vehicles. This exemplifies the prioritisation of new technologies over avoid and shift measures in the transport net zero roadmap. While EVs must play a significant role in decarbonising the transport sector, there is opportunity for active and shared transport to
complement EVs and support a more rapid transition. As aforementioned, it is important to
utilise not only improve solutions, but a suite of diverse solutions including mode shift and avoidance of unnecessary trips.
When considering investments in EV charging infrastructure, it is important to consider the
accessibility of these facilities for populations, including (but not limited to) those in rural and
regional areas, people living with a disability, reduced mobility and wheelchair users. There
are concerns that current charging infrastructure does not meet accessibility requirements,
and in order to ensure an equitable and just transition there should be genuine engagement
with these communities to ensure groups needs are being met.

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?

The Climate and Health Alliance advocated for a new strong New Vehicle Efficiency Standard (NVES) and supports the updating of the NVES. We would like to see an ambitious

NVES which is aligned with the best science available to limit warming to well below 2 degrees, and supports Australia reaching net zero emissions by 2035. As it stands, the current NVES does not support this goal. In order to protect human health, and have the best
chance of limiting warming to 1.5 degrees, we recommend strengthening the NVES over time
and setting equitable targets for the phase out of all internal combustion engine vehicles.

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?

Yes

31 9.1 Please add details to your response

CAHA supports the electrification of heavy road vehicles, however we acknowledge that there are still barriers to uptake in this area. In order to support the decarbonisation of heavy
road vehicles as technologies are evolving, we suggest a mode shift towards increasing rail
systems to move more freight. Moving freight by rail produces the lowest emissions, with the
added co-benefit of easing congestion on roads and reducing road pollution in populated areas, contributing to better health outcomes.

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?

While LCLFs produce less emissions compared to fossil fuels, they are costly and use resources inefficiently. This contributes to emissions and air pollution in their production and
use, making them a risk to human health. LCLFs may offer lower emissions short to medium
term solutions in difficult to abate transport modes, but should not be relied on where mode
shift and existing technologies are already available (as is the case with heavy road vehicles).

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.

CAHA broadly supports the net zero pathway for rail, where electrification of the rail system
is a priority and hydrogen and LCLFs are used only in the short term as a lower emissions alternative in long haul trips. To this end, we rank the energy solutions above as follows; 1) battery electric, 2) hydrogen fuel & 3) low carbon liquid fuels.
We support the above ranking of solutions to reduce emissions as electrification will result in
less transport-related air pollution and thus reduce the burden of associated morbidity (as
elaborated on above).

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?

Yes

52 21.1 Please add details to your response.

CAHA supports the net zero pathways for transport infrastructure, with a particular emphasis
on reducing embodied emissions as a key priority, as well as the development of National standards on data collection, measurement and reporting of embodied emissions to enable a
'fair comparison and assessment of emissions from transport infrastructure'. In addition to
emissions assessments, we suggest that health impact assessments, better economic

analysis and more comprehensive assessment of transport priorities should be undertaken
during the approval process of all new infrastructure projects.
As discussed in the active and shared transport section, we support the development of transport infrastructure and urban planning which prioritises the movement of people over
vehicles. This means investing in active and public transport infrastructure, including walking
paths, bike paths (including protected bike lanes), green spaces and electrified public transport.
While it is true that states and territories are primarily responsible for transport infrastructure, targets could be implemented at the Commonwealth level, which could hold
states accountable through federal expenditure restrictions on those who fail to uphold these
targets.

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?

In order to meet the energy demand during the transition to a decarbonised transport sector,
a significant increase in investment into renewable energy for electricity generation, storage
and transport is needed. This should be a priority for investment, and should be scaled up

alongside investments into alternative solutions such as LCLFs.

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

LCLFs should be considered as a last resort option, in difficult to abate transport modes as discussed above. This includes aviation, maritime and long haul road and rail transport as a
transitory solution while electrification is being scaled up.

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?

A Health in All Policies approach supports the inclusion of the health community in policy and decision making across all sectors. This is particularly pertinent in the decarbonisation
of the transport sector, where there are high linkages with health outcomes.
Rural and regional communities present unique challenges in transport decarbonisation, as
they are less connected to public transport and the facilities required for the uptake of low
emissions solutions (such as EVs), for example. While a prioritisation of decarbonising urban
areas where most people living in Australia live can support a gradual uptake of solutions in
these areas, it is also essential that genuine engagement with these communities occurs to
understand the needs and challenges of achieving net zero transport systems Australia-wide.
It is also important to engage with vulnerable populations, to ensure an equitable and just transition to net zero transport. Though it is improving, personal uptake of EVs is still costly
and out of reach for many people. Additionally, many people living with a disability have specific accessibility needs and rely on their own personal vehicle to move around, making a
shift to public and active transport unviable in some instances. During the transition, understanding the needs of these groups can ensure no one is left behind.

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

06082024_Transport_and_Infrastructure_Net_Zero_Roadmap_submission_1_.042f2831_Redacted.pdf

69 Upload a submission

Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered

caha
Climate and Health Alliance

A Healthy Net Zero Transport Roadmap

CAHA Submission to the Transport and Infrastructure Net Zero Consultation Roadmap

August 2024

Acknowledgments

The Climate and Health Alliance recognises Aboriginal and Torres Strait Islander People as the traditional custodians of the land on which we live and work, and acknowledge that sovereignty of the land we call Australia has never been ceded. We commit to listening to and learning from Aboriginal and Torres Strait Islander people about how we can better reflect Indigenous ways of being and knowing in our work.

About CAHA

The Climate and Health Alliance (CAHA) is a national health promotion charity and the peak body on climate change and health in Australia. CAHA is an alliance of organisations within the health sector working together to raise awareness about the health risks of climate change and the health benefits of emissions reductions. The membership of CAHA includes a broad cross-section of health sector stakeholders with over 100 member organisations (Appendix 1), representing healthcare professionals from a range of disciplines, as well as healthcare service providers, institutions, academics, researchers, and consumers.

Introduction

The transport sector is the third largest source of Australia's greenhouse gas emissions, amounting for 21% of national emissions in 2023 and without intervention, it's predicted transport will become the highest emitting sector by 2030. Road transport emissions have grown more than from any other sector in Australia, increasing approximately 60% since 1990. Australia's per capita road transport emissions are 45% higher than the OECD average.

Australia's over-reliance on a transport system powered by fossil fuels and combustion engines is cause for serious concern. Without intervention, emissions are only predicted to increase, putting the health of the planet and all people living in Australia at risk. It is clear that transitioning from a fossil-fuelled transport system to a net zero emission system will improve environmental and health outcomes.

No level of air pollution is safe for the environment or human health, and as such, there is a pressing need to reduce emissions. Transport-Related Air Pollution (TRAP) is significantly affecting the health of all people living in Australia. Policies must seek to decarbonise the transport sector ambitiously and rapidly with a Health in All Policies approach that recognises the health co-benefits of decarbonisation.

The good news is that many of the technologies and opportunities to decarbonise Australia's road transport system already exist. A key part of this is a shift from heavy dependence on personal light road vehicles, to greater use of active transport modes, such as walking and cycling for local travel. Decarbonisation will also require increased investment in public transport infrastructure and services. This results in a win-win-win scenario, where emissions are reduced, physical activity increases, and air quality improves.

Sector decarbonisation pathways should be aligned with the best science available, to support Australia meeting its international obligations under the Paris Agreement. This means limiting the 'increase in the global average temperature to well below 2°C above pre-industrial levels" and pursuing efforts "to limit the temperature increase to 1.5°C above pre-industrial levels". To this end, Australia should aim to reduce emissions to 75% below 2005 levels in 2030, and reach net zero emissions by 2035. Given the considerable contributions of the transport sector to total national emissions, an ambitious sector decarbonisation roadmap would be a positive step towards genuine emissions reductions and safeguarding human health.

It is crucial that health is meaningfully considered in the development of the Transport and Infrastructure Net Zero Consultation Roadmap.

The Climate and Health Alliance (CAHA) welcomes the opportunity to provide feedback on the Transport and Infrastructure Net Zero Consultation Roadmap (the Roadmap), and thanks the Department of Transport and Infrastructure for engaging with the community through the consultation process.

Key recommendations

1. **Adopt a Health in All Policies approach to transport decarbonisation**, whereby it "..integrates and articulates health considerations into policymaking across sectors to improve the health of all communities and people". This would help to ensure the health *risks* of a high emissions transport sector are considered in decarbonisation plans and the health *benefits* of a net zero emissions sector are realised.

2. **Utilise and invest in 'avoid' and 'shift' measures as a priority, in combination with scaling up 'improve' technologies.** The current Roadmap prioritises investment in technologies such as Low Carbon Liquid Fuels, over improving urban planning to allow more travel to be avoided, and shifting transport use to healthy, low emissions modes. This is crucial, as active and public transport have the most potential to produce health co-benefits, significantly reduce the risks of premature mortality and morbidity and subsequently ease the burden on the healthcare system.

3. **Ensure policies promote a just transition**, following the guiding principle of 'inclusive and equitable' with genuine engagement and implementation. Vulnerable communities, rural and regional communities and those living with a disability are all examples of groups who present unique challenges in accessing safe, reliable transport and are disproportionately affected by transport related air pollution. A just transition should also ensure that the health of all people living in Australia is safeguarded in the face of the climate crisis, and no one is left behind in the transition.

Consultation Questions

Health in All Policies

> *(1) Do you agree with the proposed guiding principles? (maximise emissions reduction, value for money, maximise economic opportunity, inclusive and equitable, evidence based)*

The Climate and Health Alliance broadly supports the five guiding principles as outlined in the Roadmap, and believes these principles promote a just transition of the transport sector. However, we would like to see health explicitly included as a principle, in addition to those already determined.

All dimensions of climate change are intrinsically linked, and action to reduce the health risks from climate change requires working across all policy areas and sectors to consider the health impacts of policies and practices. Population health is influenced by actions and policies in all sectors, including the transport sector. Health in all Policies is an established approach to working on the social determinants of health across relevant areas of government. It is used to address complex issues such as health inequities, social determinants of health, and climate change, for example.

In the context of the transport sector, we know that traffic-related air pollution has far-reaching health impacts, which places a significant burden on the healthcare system (Figure 2). In Australia, an estimated 11,000 additional deaths per year can be attributed to traffic-related air pollution. Approaching transport decarbonisation with a Health in All Policies lens will promote healthy transport policy and lifestyles.

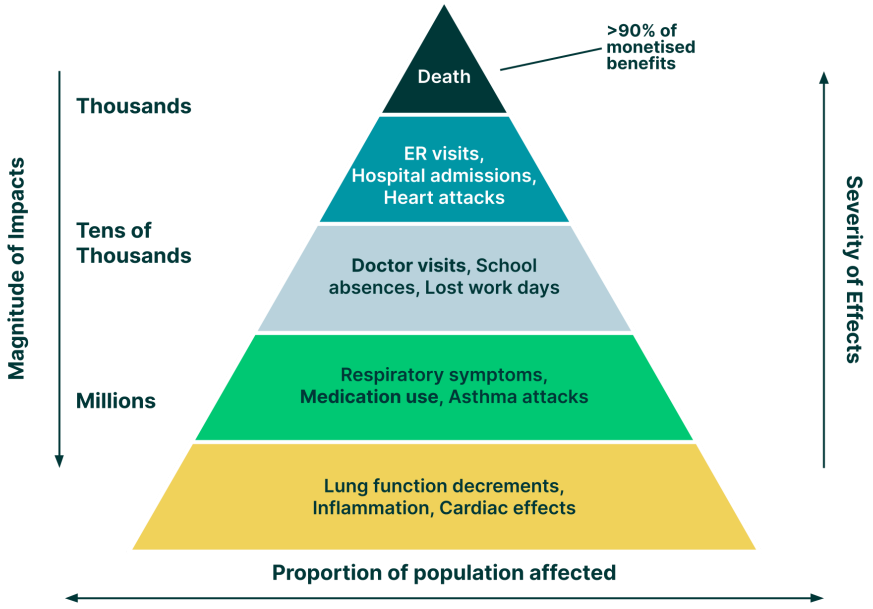

Figure 2. Pyramid of effects from air pollution. Source: US EPA, BenMAP

The avoid-shift-improve framework

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

We support avoid-shift-improve as the framework to decarbonise the transport sector, however we wish to emphasise the importance of utilising all three methods of abatement for a healthy and just transition. As the Roadmap stands, it currently prioritises *improving* technological solutions to decarbonise over the avoidance of unnecessary travel, and mode shift towards more sustainable modes of transporting people and goods, such as shared and active transport.

New modelling suggests that by utilising a diverse suite of solutions, which incorporate 'avoid' and 'shift' interventions alongside 'improve' technologies, the transport sector benefits from more decarbonisation solutions.

Prioritising abatement through avoid and shift alongside improve interventions is a win-win for climate and health. By taking advantage of diverse solutions, we are able to make use of existing transport networks reducing the emissions associated with building new infrastructure, while also realising the health co-benefits of healthy and active transport. These benefits include a meaningful increase in physical activity levels, significantly reduced risks of premature mortality and morbidity from obesity, cardiovascular disease, type 2 diabetes, dementia, ischaemic heart disease, cerebrovascular disease, osteoporosis, cancers, and other non-communicable diseases associated with inactive lifestyles.

We were pleased to see the commitment in the 2024-25 Federal Budget to invest $100 million into active transport, however this pales in comparison to the billions of dollars which will be invested into LCLFs through the Future Made in Australia Innovation Fund. While CAHA welcomes the investment into renewable energy through A Future Made in Australia, we would like to see significant investment into improving active and shared transport infrastructure alongside new technologies.

Active and public transport

> *(3) Do you agree that the development of a national policy framework for active and public transport will support emissions reduction?*
> *(4) What should be included in a national policy framework for active and public transport, and how should it be developed?*
> *(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?*

The development of a national policy framework for shared and active transport would support emissions reductions and provide an informed pathway for states and territories to progress their own plans. The Climate and Health Alliance fully supports and encourages its development. A national policy framework should set standards for transport infrastructure and urban planning which centre moving people and promote healthy transport choices, rather than accommodating cars and motor vehicles.

The policy framework should, for example, emphasise the need to 'avoid' activity that impacts human health and redirect resources from projects which promote personal light vehicle use to those which encourage the uptake of healthy transport choices.

At CAHA's 2023 Transport Roundtable, improvements to safety and accessibility were identified as a priority for promoting uptake of public and shared transport. Increased police presence at stations, separating tram lines from traffic, and policies which set out expectations for travel times would help to mitigate these concerns. CAHA supports the inclusion of a policy within the framework which would address expectations for travel times such as a Shared Transport Service Standard, as recommended by the Climate Council, which suggests public transport services operate at least every 15 minutes from 7am to 7pm within 800 metres of every home in Australia's eight capital cities. Perceived danger is also a key barrier to cycling, which can be overcome by the development of separated and safe cycling infrastructure. Barriers to uptake around safety and accessibility as above should be addressed in the framework.

There is also a need for more public awareness and buy-in to shift from high use of personal transport to public and active transport options. An attitude shift and subsequent uptake should be supported through government-funded awareness campaigns, incentives and/or tax concessions. Congestion charges to mitigate traffic-related air pollution have been successful in London and other European countries, alongside charges for diesel-fuelled vehicles driven in the city, and planning of suburban areas which promote 'low-traffic neighbourhoods'. The implementation of congestion charges such as these could help to facilitate a shift in Australia from car-centric cities to more shared and active modes of transport.

A shift towards shared and active transport is good for social connection, health and the environment.

Supply Chains

> *(6) The Australian Government has already engaged in consultation on the 2023 review of the National Freight and Supply Chain Strategy and those consultations will also inform the final Roadmap and Action Plan.*
> *(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?*
> *(6.2) How would these actions address the identified challenges and opportunities for emissions reduction in the movement of goods?*

Health can play an important role in influencing National Freight and Supply Chains given the current demand for disposable medical equipment currently imported and distributed across Australia. The health sector accounts for 7% of Australia's emissions, and of that percentage 70% can be attributed to supply chain impacts. The Australian Government's commitment to decarbonise health supply chains and improve value of care (aligned with resource use) is outlined in the National Health and Climate Strategy. Procurement policy can drive supply chain innovation and change to transport needs through requiring market providers to find and enable better solutions.

Light Road Vehicles

> *(7) Do you agree with the proposed net zero pathway for light road vehicles?*
> *(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?*
> *(8.2) How would these actions address the identified challenges and opportunities to reduce light vehicle emissions?*

As outlined in the roadmap, light road vehicles account for almost 60% of all transport emissions. A significant portion of light vehicle emissions can be attributed to personal passenger vehicles, which outnumber the number of licensed drivers on Australian roads. For these reasons, focussing on decarbonising and shifting modes of personal transport away from light road vehicles which rely on combustion engines provides a large opportunity for emissions reductions.

The Roadmap has identified electric vehicles as the key to the net zero pathway for light vehicles. This exemplifies the prioritisation of new technologies over avoid and shift measures in the transport net zero roadmap. While EVs must play a significant role in decarbonising the transport sector, there is opportunity for active and shared transport to complement EVs and support a more rapid transition. As aforementioned, it is important to utilise not only improve solutions, but a suite of diverse solutions including mode shift and avoidance of unnecessary trips.

When considering investments in EV charging infrastructure, it is important to consider the accessibility of these facilities for populations, including (but not limited to) those in rural and regional areas, people living with a disability, reduced mobility and wheelchair users. There are concerns that current charging infrastructure does not meet accessibility requirements, and in order to ensure an equitable and just transition there should be genuine engagement with these communities to ensure groups needs are being met.

The Climate and Health Alliance advocated for a new strong New Vehicle Efficiency Standard (NVES) and supports the updating of the NVES. We would like to see an ambitious NVES which is aligned with the best science available to limit warming to well below 2 degrees, and supports Australia reaching net zero emissions by 2035. As it stands, the current NVES does not support this goal. In order to protect human health, and have the best chance of limiting warming to 1.5 degrees, we recommend strengthening the NVES over time and setting equitable targets for the phase out of all internal combustion engine vehicles.

Heavy Road Vehicles

> *(9) Do you agree with the proposed net zero pathway for heavy road vehicles?*

(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.
(11) What role should low carbon liquid fuels play in heavy vehicle decarbonisation?
(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?
(12.1) How would these actions address the identified challenges and opportunities to reduce heavy vehicle emissions?

CAHA supports the electrification of heavy road vehicles, however we acknowledge that there are still barriers to uptake in this area. In order to support the decarbonisation of heavy road vehicles as technologies are evolving, we suggest a mode shift towards increasing rail systems to move more freight. Moving freight by rail produces the lowest emissions, with the added co-benefit of easing congestion on roads and reducing road pollution in populated areas, contributing to better health outcomes.

While LCLFs produce less emissions compared to fossil fuels, they are costly and use resources inefficiently. This contributes to emissions and air pollution in their production and use, making them a risk to human health. LCLFs may offer lower emissions short to medium term solutions in difficult to abate transport modes, but should not be relied on where mode shift and existing technologies are already available (as is the case with heavy road vehicles). With consideration to this, CAHA prioritises energy pathways as follows 1) battery electric, 2) hydrogen fuel cell and 3) Low carbon liquid fuels.

We support the above ranking of solutions to reduce emissions as electrification will result in less transport-related air pollution and thus reduce the burden of associated morbidity. For instance, transitioning from fossil fuel-powered buses to electric buses delivers the same health co-benefits of private EV uptake, even faster. An electric vehicle generates no tailpipe emissions – this includes greenhouse gas emissions and air pollutants such as PM2.5, nitrogen dioxide and ground-level ozone. Because of this, replacing internal combustion engine vehicles with electric vehicles is a win-win solution for tackling climate change via decarbonisation and improving health via reduced air pollution.

Rail

(13) Do you agree with the proposed net zero pathway for rail?
(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.
(15) What role should low carbon liquid fuels play in rail decarbonisation?
(16) What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce rail emissions?
(16.1) How would these actions address the identified challenges and opportunities to reduce rail emissions?

CAHA broadly supports the net zero pathway for rail, where electrification of the rail system is a priority and hydrogen and LCLFs are used only in the short term as a lower emissions alternative in long haul trips. To this end, we rank the energy solutions above as follows; 1) battery electric, 2) hydrogen fuel & 3) low carbon liquid fuels.

We support the above ranking of solutions to reduce emissions as electrification will result in less transport-related air pollution and thus reduce the burden of associated morbidity (as elaborated on above).

Infrastructure

> *(21) Do you agree with the proposed net zero pathway for transport infrastructure?*
> *(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?*
> *(22.1) How would these actions address the identified challenges and opportunities to reduce transport infrastructure emissions?*

CAHA supports the net zero pathways for transport infrastructure, with a particular emphasis on reducing embodied emissions as a key priority, as well as the development of National standards on data collection, measurement and reporting of embodied emissions to enable a 'fair comparison and assessment of emissions from transport infrastructure'. In addition to emissions assessments, we suggest that health impact assessments, better economic analysis and more comprehensive assessment of transport priorities should be undertaken during the approval process of all new infrastructure projects.

As discussed in the active and shared transport section, we support the development of transport infrastructure and urban planning which prioritises the movement of people over vehicles. This means investing in active and public transport infrastructure, including walking paths, bike paths (including protected bike lanes), green spaces and electrified public transport.

While it is true that states and territories are primarily responsible for transport infrastructure, targets could be implemented at the Commonwealth level, which could hold states accountable through federal expenditure restrictions on those who fail to uphold these targets.

Transport sector energy use

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

In order to meet the energy demand during the transition to a decarbonised transport sector, a significant increase in investment into renewable energy for electricity generation, storage and transport is needed. This should be a priority for investment, and should be scaled up alongside investments into alternative solutions such as LCLFs.

LCLFs should be considered as a last resort option, in difficult to abate transport modes as discussed above. This includes aviation, maritime and long haul road and rail transport as a transitory solution while electrification is being scaled up.

Collaboration and leadership

> *(25) What are the best ways for the Australian Government to work collaboratively with industry, business, governments and communities to implement the proposed pathways?*
> *(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?*
> *(25.2) What opportunities can the government leverage to show leadership in Australia and internationally?*

A Health in All Policies approach supports the inclusion of the health community in policy and decision making across all sectors. This is particularly pertinent in the decarbonisation of the transport sector, where there are high linkages with health outcomes.

Rural and regional communities present unique challenges in transport decarbonisation, as they are less connected to public transport and the facilities required for the uptake of low emissions solutions (such as EVs), for example. While a prioritisation of decarbonising urban areas where most people living in Australia live can support a gradual uptake of solutions in these areas, it is also essential that genuine engagement with these communities occurs to understand the needs and challenges of achieving net zero transport systems Australia-wide.

It is also important to engage with vulnerable populations, to ensure an equitable and just transition to net zero transport. Though it is improving, personal uptake of EVs is still costly and out of reach for many people. Additionally, many people living with a disability have specific accessibility needs and rely on their own personal vehicle to move around, making a shift to public and active transport unviable in some instances. During the transition, understanding the needs of these groups can ensure no one is left behind.

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

- **CAHA Clearing the air: Transport decarbonisation and our health**
- **The Fuel Efficiency Standard: Cleaner, Cheaper to Run Cars for Australia CAHA Submission**
- **CAHA Reducing car dependency for health and climate**

For more information, please contact:

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