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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3 Published name
The Australian Industry Group

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Yes

5 First name
Not answered

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7 Email
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9 Who are you answering on behalf of?

Organisation

10 Organisation name

Not answered

11 What best describes you or your organisation?

Not answered

12 What sector do you represent?

Not answered

13 What state or territory do you live in?

Victoria

14 Postcode

3004

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.

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?

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?

Yes

27 7.1 Please add details to your response.

Not answered

28 8. The Australian Government is currently developing an Australian New Vehicle Efficiency Standard and has already begun to implement actions in the National Electric Vehicle Strategy.8.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce light vehicle emissions?

Not answered

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

Not answered

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

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.

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?

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

Ai_Group_Submission_Transport_and_Infrastructure_Net_Zero_Consultation_Roadmap.6f581d7a_Redacted.pdf

69 Upload a submission

Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered

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AI GROUP RESPONSE TO THE TRANSPORT AND INFRASTRUCTURE NET ZERO CONSULTATION ROADMAP

The Australian Industry Group (Ai Group) welcomes the chance to make a submission addressing selected topics in the Transport and Infrastructure Net Zero Consultation Roadmap Discussion Paper (the Paper).

Ai Group is a peak national employer organisation representing traditional, innovative and emerging industry sectors. We have been acting on behalf of businesses across Australia for nearly 150 years. Ai Group is genuinely representative of Australian industry. Together with partner organisations we represent the interests of more than 60,000 businesses employing more than 1 million staff. Our members are small and large businesses in sectors including manufacturing, construction, engineering, transport & logistics, labour hire, mining services, waste services, the defence industry, retail, aged care, civil airlines and ICT.

A successful transition to net zero is strongly in Australia's national interest; minimising global temperature increases will minimise the serious social, economic and environmental impacts Australia faces from climate change. Addressing transport and related infrastructure is essential to that goal given both the size of our current transport emissions and the centrality of transportation to industry and households. Our economic opportunities in a world pursuing net zero emissions are very substantial if we pursue them effectively, including the potential for clean energy intensive product exports. While the delivery of scalable and cheap clean energy is central to the achievement of that opportunity, addressing domestic and international transport emissions will help all goods exports be more competitive in international markets, particularly given the vast distances our goods often must travel from primary input locations to end markets.

The Paper's **guiding principles** (maximising emissions reduction, seeking value for money, maximising economic opportunity, inclusivity and equity, an evidence-based approach) are sensible. It is important to consider the value for money of emissions reductions over the whole sweep of the response to climate change. While it makes sense to seek abatement in bulk in the near term from the cheapest current options, it is also important to develop and deploy abatement options that are expensive today but which have the potential to become significantly cheaper with learning effects and scale. The dynamic of deployment, learning, cost reduction, and greater deployment to larger addressable markets is very powerful, though it is not equally applicable to every technology. Assessments using point-in-time marginal abatement cost curves and point targets for abatement need to be bolstered by consideration of learning rates and long term transition costs.

The **avoid-shift-improve** framework for considering abatement opportunities is also useful. There are opportunities to meet business and household needs with less travel through the smarter organisation of activity or the deployment of information technology. There are also important contributions that can be made through shifting modes of transport. Together, avoidance and shifting can bolster the emissions savings achievable over the next two decades and moderate

costs. However, we should keep some important qualifiers in mind:

- There is no escaping the need for underlying transport technologies to decarbonise wherever possible. Efficient use of transport can help fit within a carbon budget, but cannot deliver net zero emissions without transport itself becoming much cleaner.
- Transport is a means of creating many sorts of value. Creating that value with less transport can be well worthwhile where practical, whereas simply foregoing the underlying value is unlikely to be sensible. The Paper does well in stating the framework to recognise the role of avoiding transport that people would prefer not to undertake.
- Mode shift can be complex and require strong coordination within and between governments and with stakeholders to deliver. For example, while mode-shift from road to rail is possible for a share of current road freight, caution should be exercised to ensure system resilience. As seen through the COVID period, business supply chains can be impacted severely when systems are not designed to avoid single points of failure. Driving more freight to rail, while trying to increase public transport use, will also risk congestion issues on networks. Infrastructure buildout to increase capacity, and to enable distribution of low-carbon alternative fuels and charging access for rail will be key to decarbonising

That said, the indicative directions in the Paper for cutting freight system emissions are sensible and capture the right arenas for action and roles for governments.

Ai Group is broadly supportive of the indicative timeline for **light vehicle** decarbonisation, and the initial technology-agnostic approach, to allow current fleet stock to reach end-of-life and retire in an orderly fashion while new low-emissions technologies proliferate. The New Vehicle Efficiency Standard and other Government initiatives that promote the uptake of clean technologies for passenger and light commercial vehicles will be important to accelerate the uptake to critical penetration, both in new vehicles and the second-hand market. The turn-over of cleaner vehicles into the second-hand market is key to ensuring a just transition for all consumers.

The delivery and maintenance of adequate charging infrastructure will be very important to facilitate the expected growth of battery electric vehicles. Challenges include the difficulty of coordinating the growth of charging networks and BEVs; managing utilisation of network capacity at fast charging sites; and keeping chargers in good order when capital supports for the expansion of charging networks precede sustainable operating revenue.

The cross-sectoral interactions of the light vehicle transition are extremely important. Battery electric vehicle charging will moderately increase overall annual electricity demand, and it could very significantly affect peak demand and the shape of the daily and seasonal load profile. Depending on how well this is managed, the combined cost of energy and transport services could decline or increase. Three levels of ambition are needed:

- Charging coordination to minimise peak demand growth is essential and foundational. Financial incentives, education and suitable hardware and software systems must work together to enable the vast bulk of charging to avoid the 4-9pm window when the grid is under greatest strain, and where possible to redirect it to the 10am-2pm window when energy is most plentiful and grid demand is falling.
- Provision of vehicle-to-building services could be very valuable in enabling households and businesses to realise more value from their own generation and storage and limit their peak demand on the grid. Helping vehicle owners to use their batteries to meet their own needs is more complex to achieve than charging coordination, but likely easier than provision of

direct services to the wider grid.
- Provision of vehicle-to-grid services could unlock enormous storage resources at low incremental cost. However, the challenge of achieving sufficient and reliable participation is great and this resource will take much time, effort and coordination to achieve.

The recently agreed Consumer Energy Resources Roadmap is an excellent start on these efforts.

Regarding **heavy vehicles**, the Paper is reasonable in noting the available options for decarbonisation and the challenges facing their uptake. There are challenges with all options for road freight decarbonisation.

- Low Carbon Liquid Fuels can potentially be drop-in solutions with existing hardware (though depending on specific fuels and vehicles hardware upgrades may still be required. However, LCLFs are very scarce in the near term and are likely to entail a significant operating cost premium over the long term; road freight applications will also face major competition for the available LCLF feedstock from other bioenergy applications, including Sustainable Aviation Fuels.
- Hydrogen fuel cell vehicles are potentially the most viable option for heavy and long range vehicles, but the cost and availability of hydrogen is a significant constraint (albeit one the Government's policies will help address) and vehicles are unavailable or unfamiliar and expensive.
- Battery electric is becoming more viable in more freight niches as technology improves and costs decline, but is unlikely ever to suffice for the longest range and heaviest freight needs. Significant upgrade investments can be expected, both to cover new vehicles and to ensure adequate charging infrastructure.

Some of Ai Group's transport sector members are working with public agencies to pilot options for decarbonisation. We are hopeful that more information and experience will clarify the most prospective solutions for the range of freight needs.

Making low- and zero-carbon heavy transportation investable and affordable is a key issue given the cost sensitivity of transport operators and their frequently thin margins. Two policy levers are obviously relevant: the Safeguard Mechanism and the Fuel Tax Credits system.

The Safeguard Mechanism is an important tool for encouraging emissions reductions in Australia's largest facilities. Its current coverage of transport is very limited and has the potential to create anomalies and inequities as covered road freight, rail and aviation businesses face deeper cuts in their entitled emissions intensity baselines, while uncovered competitors (within the same segment and across modes) do not. There are potential reforms to address these anomalies and expand coverage, including reduction of the coverage threshold from the current level of 100,000t CO_2e per annum, or the upstream coverage of downstream fuel combustion emissions by ascription of the latter to fuel refiners and importers. These would be significant changes with complex impacts across different stakeholders, and are best considered in the already-planned major review of the Safeguard planned for 2026-27.

Fuel Tax Credits are currently a very substantial tax expenditure, estimated to forego $10.b in 2024-25. These credits are a complex and sensitive topic, and important to transport, mining and agricultural businesses. However, it would be sensible to think about how they can evolve to complement and support the transition to net zero. One potentially helpful idea would be to offer an option for fuel tax credit users to exchange part of the future stream of credits they would otherwise be expected to claim for an investment tax credit to offset the costs of acquiring low- or zero-

emissions heavy vehicles and associated charging and fuelling infrastructure.

The changeover to the Euro 6 system will take time to penetrate the existing national fleet, particularly for those operators who source their vehicles second-hand. Cost factors for transitioning existing fleets to low/zero emissions technologies would need to be adequately addressed and/or incentivised to help drive businesses investment certainty, particularly for long-distance heavy freight. The associated costs for new technologies – beyond initial investment – in the heavy haulage category are currently not yet fully understood by businesses, and the current lack of supporting infrastructure for charging/refuelling for some of these technologies is compounding the uncertainty.

In **aviation** we agree that Sustainable Aviation Fuels are likely to be the dominant solution, though battery electric solutions may become relevant to a wider range of flight niches than currently expected. The affordability and investability of SAF can be addressed through a combination of production supports and Safeguard Mechanism coverage of end use, with the latter becoming more central over time. The greatest challenges with SAF are likely to be ensuring that adequate feedstock is available and genuinely sustainable, and managing the likely intense competition for that feedstock across the many sectors and activities that may want biomass to assist their decarbonisation and growth strategies. The volume of biomass required for transition-relevant quantities of SAF is very large, but given the capacity to pay of aviation customers and the limitations of alternatives, SAF demand will plausibly outcompete other potential demand centres for biomass. A critical task for the Government in aggregating its six Sector Plans into a revised national Net Zero Roadmap is to ensure consistency and coherence in planning around biomass allocation and availability.

On **transport infrastructure**, the focus on lowering operational emissions now and embodied emissions in the medium term is appropriate. The Government's consideration through the Carbon Leakage Review of options including a Carbon Border Adjustment Mechanism will be very important to achieving the long-term ambition that low- and zero-carbon cement and steel will be cost-competitive with conventional alternatives.

For any questions in relation to this submission, please contact Ai Group Director of Climate Change and Energy Tennant Reed ([redacted]).

Sincerely yours,

Louise McGrath
Head of Industry Development & Policy