

Transport and Infrastructure Net Zero Consultation Roadmap

Take the survey

Department of Climate Change, Energy, Environment and Water

Response received at:

July 26, 2024 at 2:48 PM GMT+10

Response ID:

sbm2f83771eac11cdfab0b3

- 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
Chamber of Minerals and Energy of WA
- 4 Confirm that you have read and understand this declaration.
Yes
- 5 First name
Not answered
- 6 Last name
Not answered
- 7 Email
Not answered

- 8** Phone
Not answered
- 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?
Western Australia
- 14** Postcode
6000
- 15** What area best describes where you live?
City
- 16** 1. Do you support the proposed guiding principles?
Not answered
- 17** 1.1 Please add details to your response.
Not answered
- 18** 2. Do you support the use of the avoid-shift-improve framework as a tool to identify opportunities for abatement?
Not answered

- 19** 2.1 Please add details to your response.
Not answered
- 20** 3. Do you agree the development of a national policy framework for active and public transport will support emissions reduction?
Not answered
- 21** 3.1 Please add details to your response.
Not answered
- 22** 4. What should be included in a national policy framework for active and public transport and how should it be developed?
Not answered
- 23** 5. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the movement of people contributes to transport emissions reduction?
Not answered
- 24** 6.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure that the movement of goods contributes to transport emissions reduction?
Not answered
- 25** 6.2. How would these actions address the identified challenges and opportunities for emissions reduction in the movement of goods?
Not answered
- 26** 7. Do you agree with the proposed net zero pathway for light road vehicles?
Not answered

- 27 7.1 Please add details to your response.
Not answered
- 28 8. The Australian Government is currently developing an Australian New Vehicle Efficiency Standard and has already begun to implement actions in the National Electric Vehicle Strategy.8.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce light vehicle emissions?
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?
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?
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

20240726 CME - Transport and Infrastructure Net Zero Roadmap submission.pdf

69 Upload a submission

Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered

26 July 2024



Mr David Mackay

Acting Secretary, Department of Infrastructure, Transport, Regional Development, Communications and the Arts

Sent via email: NetZero@infrastructure.gov.au

Dear Mr Mackay,

TRANSPORT AND INFRASTRUCTURE NET ZERO CONSULTATION ROADMAP

The Chamber of Minerals and Energy of Western Australia (CME) is the peak representative body for the resources sector in Western Australia. CME is funded by member companies responsible for 20 per cent of Australia's corporate income tax receipts in 2022-23.¹

In 2022-23, the WA resources sector accounted for 65 per cent of Australia's resources exports,² half of Australia's resources capital expenditure³ and 53 per cent of Australian resources employment.⁴

CME supports the Paris Agreement and its goal of limiting global warming to well below 2, preferably to 1.5 degrees Celsius, by reducing emissions to net zero as soon as practicable and no later than 2050.⁵ Members **support promotion of lowest cost abatement across the economy and recognise that achievement of Australia's 2050 net zero target will require significant investment in a broad range of technologies and projects.** In order to ensure an equitable and efficient energy transition, a mix of renewable and low carbon energy sources are essential to allow all sectors, including the transport sector, to contribute proportionately to Australia's emissions reduction target of 43 per cent below 2005 levels by 2030, and targets that will be set in the future for beyond.

CME welcomes the opportunity to provide feedback to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts' (DITRDCA) consultation on the Transport and Infrastructure Net Zero Consultation Roadmap (Transport Roadmap).

The CME supports the guiding principles which will direct the development of the final Transport Roadmap and Action Plan. CME maintains that clear, evidence-based policies which consider market readiness and deployment timeframes are critical to incentivise private sector investment and innovation.

CME has sought feedback from member companies to make a series of recommendations that support the development of enabling policy and incentivise industry investment in transport decarbonisation solutions.

1. Proposed pathways for decarbonising freight transport modes

a. Heavy road vehicles

The resources sector depends on heavy road vehicle transport of process inputs, mining equipment and ore throughout regional WA. This highly efficient road transport system currently relies exclusively on diesel, and zero-emissions articulated truck technology is still nascent for much of the world.⁶ Therefore, the **CME supports the government's proposed pathway that encourages fuel-switching to renewable diesel in the short term.** Adoption of zero emission trucks in the medium to long term relies on accelerating deployment of electric charging and hydrogen refuelling infrastructure in regional areas, and an immediate focus on supporting pilot and demonstration trials of battery electric or fuel cell electric trucks. Acknowledging that some Original Equipment Manufacturers (OEM) are already working with customers on trials, like Sandvik,

¹ Includes company tax, fringe benefits tax, petroleum resource rent tax and excise duty. Commonwealth of Australia, [Final Budget Outcome 2022-23](#), The Treasury, 22 September 2023, Note 3: Taxation revenue by type, p 39.

² Government of Western Australia, [2022-23 Economic Indicators Resource Data File](#), Department of Energy, Mines, Industry Regulation and Safety (DEMIRS), 9 January 2024. Australian Bureau of Statistics (ABS), [5368 International Trade in Goods](#), Table 32a.

³ Investment refers to capital expenditure as measured by gross fixed capital formation, current prices. ABS, [5220 Australian National Accounts: State Accounts](#), Table 25. ABS, [5206 Australian National Accounts: National Income, Expenditure and Product](#), Table 34.

⁴ ABS, [6291 Labour Force, Australia, Detailed](#), Table 5.

⁵ CME Climate Change Policy available at <https://www.cmewa.com.au/policy-advocacy/policy-areas/climate-change/>

⁶ [Decarbonising Australia's transport sector](#), Climateworks, 2024.

Barmingo and AngloGold Ashanti at Sunrise Dam⁷, broader domestic technoeconomic assessment of these trucks will encourage further OEM investment in mining equipment electrification and support early adoption.

b. Rail freight

Western Australian iron ore represents around 69 per cent of national rail freight by weight.⁸ Decarbonising this freight mode is important for maintaining market access and CME members are leading private investment and innovation in battery electric locomotive technologies in the Pilbara.⁹ **The CME supports the Government investing in multiuser charging and refuelling infrastructure for regional rail freight networks. Further to this, the CME recommends the integration of charging and refuelling infrastructure with heavy industrial estates, intermodal terminals, ports and road networks.** Alignment with state-based freight transport network plans and consulting with industry is key to effective co-investment.

c. Maritime transport

Shipping is a hard-to-abate sector and decarbonising maritime freight is a global challenge. Decarbonisation of international maritime transport is important for the WA resource sector demonstrated by Fortescue's world first trial of ammonia as a marine fuel in a dual-fuelled ammonia-powered vessel in Singapore.¹⁰ BHP and Rio Tinto are also investigating the use of green and low-carbon ammonia in the Pilbara iron ore shipping route, however, there is a significant cost gap compared to conventionally-fuelled vessels for the foreseeable future.¹¹ Additionally, decarbonising coastal shipping is critically important for the aluminium industry in Australia, which utilises shipping to transport primary products to domestic locations for further processing. **The CME recommends that government policy incentivises production of the full range of low and zero carbon fuels to enable both coastal and international maritime transport to decarbonise.** Delivery of industry-scale, hydrogen-derived, zero carbon marine fuels will require access to strategic and general industrial land co-located with ports. The WA and Australian Governments have a role to integrate, plan and support streamlined delivery of these projects, positioning Australia to take advantage of its renewable resources and become a zero carbon-fuelled maritime transport destination.

d. Aviation

The resources sector in WA relies on access to a sustainable aviation sector to attract and retain its skilled workforce. CME supports policy to scale the domestic supply of sustainable aviation fuel (SAF) to decarbonise domestic aviation and recognises the need to prioritise LCLFs across different transport modes over time to achieve maximum abatement. **Based on an abatement potential, the resources sector could require significant volumes of renewable diesel in the short to medium term necessitating prioritisation of renewable diesel production over SAF.** Initially establishing renewable diesel production as the foundation of a domestic LCLF industry will reduce the cost of scaling SAF production and potentially remove the need to pass costs onto aviation customers. In the medium to long term, electrification of land transport will re-direct LCLF production towards maritime and aviation transport modes.

2. Resilient transport infrastructure to enable decarbonisation

The WA resources sector is critically reliant on remote, road and rail transport systems that are vulnerable to changing climate and extreme weather events. **Land transport systems underpin the efficiency of the sector's supply chains and require significant investment to mitigate climate-related disruptions, enable utilisation of zero emissions transport modes and maintain economic opportunities.** Yearly flooding events that disrupt the east-west corridor of the Trans-Australian railway and

⁷ [Largest Battery Electric Mining Truck to be Tested in Australia - AfMA](#)

⁸ [Australian aggregate freight forecasts – 2022 update](#), BITRE.

⁹ [BHP orders four battery-electric locomotives for WAIQ rail network, Fortescue Williams \(WAE\) settlement powers development of world's first Infinity Train | Fortescue, Rio Tinto purchases first battery-electric trains for the Pilbara. Electric heavy hauler | Wabtec and Roy Hill unveil the first FLXdrive battery locomotive - Roy Hill](#)

¹⁰ Fortescue, [World's first use of ammonia as a marine fuel in a dual-fuelled ammonia-powered vessel in the Port of Singapore](#)

¹¹ Global Maritime Forum, [Fuelling the decarbonisation of iron ore shipping between WA and East Asia with clean ammonia](#), May 2023

the cyclone-generated floods in the Kimberley which cut access to the East Kimberley and Northern Territory during 2023, will become more frequent meaning adaptation is essential. This responsibility is currently the inequitable burden of regional LGAs who manage more than 130,000 kilometres of sealed and unsealed roads in WA.¹²

Co-investment and active coordination across all levels of government is needed to provide resilient transport infrastructure to enable deployment of zero-emissions transport that will positively contribute to industry sustainability and competitiveness. Critically, climate adaptation must underpin planning and design to mitigate disruption risks from more frequent and extreme weather events. **Investment in road infrastructure by all levels of government must consider the contribution of the WA resources sector to the economy and its reliance on resilient, remote and regional land transport networks.**

We acknowledge that mining companies often fund local road infrastructure and, in these cases, recommend that long-term governance arrangements with local government must be underpinned by appropriate planning which considers climate adaption as well as cost and benefit.¹³

Conclusion

Without supportive policy and enabling regulation Australia's resources sector will become constrained by less competitive supply chains that will impact access to compliance markets like the EU¹⁴ and undermine the sustainability and competitiveness of the sector.

Therefore, **CME is broadly supportive of the Australian Government's Transport and Infrastructure Roadmap and recommends that close consultation and collaboration with the resources sector is essential to accelerate private and co-investment in enabling infrastructure.**

Should you have questions regarding this letter, please contact Mr Steven Mills, Manager Climate and Energy, on [REDACTED] or via email at [REDACTED]

Yours sincerely,

[REDACTED]

Adrienne LaBombard
Director – Policy & Advocacy

¹² Main Roads WA, [Western Australian Road Hierarchy](#), D10#156630, October 2010.

¹³ CME submission to Inquiry into Local Government Sustainability [Submissions – Parliament of Australia \(aph.gov.au\)](#) submission #150

¹⁴ The [Carbon Border Adjustment Mechanism](#) will apply to cement, iron and steel, aluminium, fertilisers, electricity and hydrogen imported into the EU.