Transport and Infrastructure Net Zero Consultation Roadmap

Take the survey

Department of Climate Change, Energy, Environment and Water

Response received at:
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1 Confirm that you have read and understand this privacy notice.
Yes

2 Please indicate how and if you want your submission published.
Public

3 Published name
Green Building Council of Australia

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

5 First name
Katy

6 Last name
Dean

7 Email
[redacted]

8 Phone

Not answered

9 Who are you answering on behalf of?

Organisation

10 Organisation name

Green Building Council of Australia

11 What best describes you or your organisation?

Industry

12 What sector do you represent?

Other: "Sustainable built environment"

13 What state or territory do you live in?

New South Wales

14 Postcode

2000

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

179 Redacted
GBCA_submission_re_Transport_and_Infrastructure_Sector_Plan.9c904eee.pdf

69 Upload a submission

Not answered

70 Upload supporting file

Not answered

71 Upload supporting file

Not answered

Green Building Council Australia

Building a sustainable future

2 August 2024

Transport and Infrastructure Net Zero Team
Department of Infrastructure, Transport, Regional Development, Communications and the Arts
Australian Government

Via online consultation page: https://www.infrastructure.gov.au/have-your-say/transport-and-infrastructure-net-zero-consultation-roadmap
Via email: NetZero@infrastructure.gov.au

Dear Transport and Infrastructure Net Zero Team

Re: Transport and Infrastructure Net Zero Plan consultation

Green Building Council of Australia (GBCA) welcomes the opportunity to provide input to the Transport and Infrastructure Net Zero Plan consultation (the sector plan) and acknowledges the work of the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) and other government stakeholders across jurisdictions in progressing a coordinated approach to related policy development.

We note that alongside this process there are several recent national plans and strategies, as well as a number under development that will impact and complement this sector plan. This includes the National Electric Vehicle Strategy, the National Energy Productivity Strategy, the Update to the Trajectory for Low Energy Buildings, the National Urban Policy and the development of five other sector plans under Australia's Net Zero Plan, including development of the Built Environment Sector Plan (BESP). Several states and territories have also developed or are developing sector plans.

GBCA and many of our industry colleagues have provided valuable input to many of these recent plans and strategies. We will continue to work with government and the wider industry as the sector plans are developed to ensure that key issues for the built environment are included in comprehensive and effective pathways to net zero. We urge that this sector plan is developed in close collaboration with the BESP. Not only to maximise emissions reduction opportunities and enhance transport decision-making, but so that it may play an effective part in creating healthy, sustainable, liveable and productive cities and communities.

As input to this consultation, GBCA makes the following recommendations:

1. **Continue to prioritise reducing embodied emissions in the infrastructure sector**
2. **Recognise the central role of buildings and the built environment in reducing transport sector emissions**
3. **Continue to align efforts across jurisdictions and industries.**

About GBCA
GBCA's purpose is to lead the sustainable transformation of the built environment. We do this primarily through our core functions:

- We rate the sustainability of buildings, fitouts and communities through Australia's largest national, voluntary, holistic rating system – Green Star.

- We educate industry, government practitioners and decision-makers, and promote green building programs, technologies, design practices and operations.
- We advocate policies and programs that support our vision and purpose.
- We collaborate with our members and other stakeholders to achieve our mission and strategic objectives.

Green Star is Australia's most widely used sustainability rating system for the design, construction and performance of buildings – including social infrastructure – fitouts and communities. Green Star aims to transform the built environment by:

- reducing the impact of climate change
- enhancing our health and quality of life
- restoring and protecting our planet's biodiversity and ecosystems
- driving resilient outcomes for buildings, fitouts, and communities
- contributing to market transformation and a sustainable economy.

More detail on the recommendations listed above, as well as reference to some additional useful resources is provided below:

1. Continue to prioritise reducing embodied emissions in the infrastructure sector

Embodied carbon is defined by the World Green Building Council as "carbon emissions associated with materials and construction processes throughout the whole lifecycle of a building or infrastructure".[1] In 2019, it made up 16% of Australia's built environment emissions and without intervention this share will balloon to 85% in 2050[2] at a time when Australia must achieve net zero emissions in line with our national obligations under the Paris Agreement.

Some important steps towards reducing embodied carbon in buildings are already underway:

- The National Australian Built Environment Rating System (NABERS) team (with support from GBCA and other industry stakeholders) is developing an embodied carbon rating tool for buildings.[3]
- ASBEC is leading the Embodied Carbon Framework for the Built Environment project which aims to inform a long-term sectoral strategy for zero-carbon-ready buildings.
- The Green Star Buildings rating tool requires all projects to reduce upfront embodied carbon by at least 10% when compared to a reference building (which will increase to at least 20% for all projects registering from 2026 and all projects completed from 2030).
- The NSW State Environmental Planning Policy (Sustainable Buildings) 2022 requires all non-residential developments to disclose the quantities of key materials (for the superstructure, substructure and facade) and associated embodied emissions and describe how embodied emissions were minimised (by re-used or recycled content).
- The Australian Government's Environmentally Sustainable Procurement (ESP) Policy takes steps towards reducing embodied carbon through procurement decision-making.

[1] https://worldgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2022/08/09111508/ANZ-Status-Report-2020_PUBLICATION_reduced.pdf
[2] https://gbca-web.s3.amazonaws.com/media/documents/embodied-carbon--embodied-energy-in-australias-buildings-2021-07-22-final-public.pdf
[3] https://www.nabers.gov.au/publications/nabers-embodied-emissions-initiative

- At their recent meeting in June, Australia's Commonwealth, state and territory Building Ministers took the decision to include a voluntary pathway in National Construction Code 2025 for commercial buildings to measure and report on embodied carbon utilising the NABERS method.[4]

The BESP and other sector plans must include actions to urgently reduce embodied carbon, not just in buildings, but in all infrastructure and across supply chains. Recent research from Infrastructure Australia[5] found that buildings and infrastructure are directly responsible for a third of Australia's total carbon emissions and indirectly for over half of them. The Embodied Carbon Projections for Australian Infrastructure and Buildings report finds that construction activity will produce between 37 and 64 Mt of CO_2e in upfront embodied carbon each year for five years to 2026-27. This is a total of 247 Mt of CO_2e over the period. The report also shows that close to a quarter of these emissions (23%) can be abated by employing practical decarbonisation strategies by 2026-2027.

Some of the biggest leaps in decarbonising our supply chains will occur when demand for low-embodied-carbon materials and products is generated at scale via infrastructure projects and coordinated infrastructure policy. We commend the recent decision taken by Commonwealth, state and territory transport and infrastructure Ministers[6] to approve national adoption of the Embodied Carbon Measurement for Infrastructure: Technical Guidance.[7] The policy and guidance, developed by Infrastructure NSW in collaboration with NSW Government agencies and industry, is an excellent example of coordinating government and industry efforts towards a common goal.

Below are two sets of recommendations that aim to put the built environment on a path towards zero embodied carbon emissions. We commend progress already underway against several of these recommendations and encourage consideration of how these can be firmly embedded into the sector plan:

Every Building Counts[8] (released by GBCA and Property Council of Australia in 2023):

- Adopt a credible national framework for measuring embodied carbon.
- Introduce embodied carbon targets into the NCC.
- Create an embodied carbon national database for products and materials.
- Introduce embodied carbon reduction requirements for government projects.
- Support Australian product manufacturers and overseas importers to calculate and disclose embodied carbon content.

Infrastructure Australia makes the following six recommendations to government:[9]

- Develop a comprehensive national plan to promote the decarbonisation of embodied carbon in the built environment.
- Build confidence and literacy to enable the uptake of low carbon products and solutions across the built environment.

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[4] https://www.industry.gov.au/news/building-ministers-meeting-communique-june-2024
[5] https://www.infrastructureaustralia.gov.au/sites/default/files/2024-07/IA24_Embodied%20Carbon%20Report.pdf
[6] https://www.infrastructure.gov.au/sites/default/files/documents/itmm-communique-7-june-2024.pdf
[7] https://www.infrastructure.nsw.gov.au/media/ak2o0bqg/decarbonising-infrastructure-delivery-measurement-guidance.pdf
[8] https://everybuildingcounts.com.au/wp-content/uploads/sites/37/2023/04/Every-Building-Counts-2023-Edition.pdf
[9] https://www.infrastructureaustralia.gov.au/embodied-carbon-projections

- Develop a nationally standardised embodied carbon measurement system, which allows for consistent methods to collect, measure and assess data about embodied carbon.
- Agree and implement a common national approach to drive market demand for low carbon solutions.
- Develop new methods for project delivery which share risks and rewards for innovative approaches.
- Work with industry to drive national alignment on low-carbon expectations through performance-based standards and specifications and identify faster ways to update them

We also note the recently released Circular Economy Ministerial Advisory Group Interim Report[10] and urge consideration of the recommendations detailed in this report to help address embodied carbon emissions (as well as addressing a range of other environmental issues and economic opportunities).

Please also see GBCA's A practical guide to upfront carbon reductions: For new buildings and major refurbishments.[11]

2. Recognise the central role of buildings and the built environment in reducing transport sector emissions

In its advice to this consultation,[12] the Climateworks Centre recommends that putting emissions reduction at the heart of funding decisions will require careful thinking about all the ways we can reduce transport emissions.

GBCA agrees that if we require consideration of emissions at the point that funding decisions are made – and if appropriate metrics and methods of verification are also put in place – there will be a profound impact on the way we procure, design and construct our built environment.

This approach will encourage thinking and planning beyond a primary focus on electric vehicle (EV) uptake and look for ways to increasing the use of public transport, active transport and rail freight (A.K.A 'mode shift'), reduce travel activity where opportunities exist, and build less infrastructure where appropriate.[13] We can do more than just accelerate the transition to EVs. Rethinking transport sector emissions presents an ideal opportunity to make our cities and communities more liveable, healthy, resilient and sustainable places.

While a successful approach to reducing emissions in the transport sector will be multi-faceted, EVs undoubtedly have a critical role to play. GBCA notes that in turn, the role of buildings is vital in the uptake of EVs. A successful transition to EVs will rely on charging infrastructure in homes, workplaces and other buildings and there are many details we need to get right to ensure the best outcomes for everyone.

Achieving our national emissions reduction targets will rely on electrification of our buildings and communities, so planning for EV infrastructure must go hand in hand with planning the electrification of our built environment.

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[10] https://www.dcceew.gov.au/sites/default/files/documents/circular-economy-ministerial-advisory-group-interim-report.pdf

[11] https://gbca-web.s3.amazonaws.com/media/documents/a-practical-guide-to-upfront-carbon-reductions.pdf

[12] https://www.climateworkscentre.org/news/eight-recommendations-for-australias-transport-and-infrastructure-net-zero-roadmap/

[13] https://www.climateworkscentre.org/news/eight-recommendations-for-australias-transport-and-infrastructure-net-zero-roadmap/

Over the past few years, GBCA has worked extensively with stakeholders from across the built environment sector, as well government, to update the Green Star rating tools and to provide guidance to support the transition to EVs, as well as electrification of buildings and communities.

For example, in GBCA's A practical guide to electrification – For existing buildings[14] and A practical guide to electrification – For new buildings,[15] we highlight elements that must be taken into account when considering EV charging such as planning the availability and types of charging infrastructure, electrical system capacity and how EV charging infrastructure can be linked to renewable energy generation and storage as part of effective Consumer Energy Resources.

Developing strategy, policies and regulations will be complex, but getting it right – and ensuring consistency across key national plans and strategies – will deliver huge benefits for our emissions reductions, our economy and our competitiveness, as well as improving a range of positive health and liveability outcomes.

The Green Star rating tools include criteria that encourage and reward building and community projects which include/maximise access to active transport facilities and public transport, provide or pre-install EV charging infrastructure, and ensuring a proportion of car parking spaces are EV ready. These points highlight some of the opportunities and considerations for enabling EV infrastructure.

We encourage the government to continue to work with built environment stakeholders on a national approach to developing policies that will encourage the installation of charging infrastructure where we need it and accelerating the electrification of the built environment as an enabler of the transition to EVs. The recent Public Comment Draft for National Construction Code (NCC) 2025 included proposed changes to the NCC that will require new buildings to be 'EV-ready'. For some building types, this will include installation of EV charging facilities, while for homes this will mean inclusion of greater switchboard capacity to allow for installation of EV charging facilities.

3. Continue to align efforts across jurisdictions and industries.

Several states and territories have also developed or are developing sector-specific approaches to emissions reductions. For example, the Queensland Government is developing sector plans that will help to deliver on the emissions reduction targets enshrined in legislation by the *Clean Economy Jobs Act 2024*.[16] The NSW Government will undertake similar efforts to support its *Climate Change (Net Zero Future) Act 2023*.[17] The WA Government has developed the Sectoral Emissions Reduction Strategy for Western Australia.[18] The VIC Government has made sectoral emissions reduction pledges.[19]

While individual states may define their sectoral approach differently to the six sector plans under Australia's Net Zero Plan, it is important that intent and targets are aligned as much as possible to provide greater certainty and consistency for the private sector and to ensure all efforts are working towards the same overall goals.

As noted in relation to Recommendation 1, a range of initiatives are underway to tackle embodied carbon emissions in buildings and the infrastructure sector which can enrich the sector plan. In a further example, the Infrastructure Net Zero (INZ) initiative, which is a collaboration of existing organisations (predominantly industry associations but also including Infrastructure Australia and DITRDCA), has committed to driving lasting policy change and industry innovation towards decarbonising Australia's infrastructure.

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[14] https://gbca-web.s3.amazonaws.com/media/documents/electrification-guide---existing-buildings-final.pdf

[15] https://gbca-web.s3.amazonaws.com/media/documents/a-practical-guide-to-electrification.pdf

[16] https://www.energyandclimate.qld.gov.au/about/strategy/clean-economy-pathway

[17] https://www.energy.nsw.gov.au/nsw-plans-and-progress/government-strategies-and-frameworks/climate-change-net-zero-future-act-2023

[18] https://www.wa.gov.au/system/files/2024-07/sers-final-report-20240702.pdf

[19] https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change

Administration of the INZ initiative is currently transitioning into the operations of the Australian Sustainable Built Environment Council (ASBEC). As an ASBEC member and a founding stakeholder of INZ, GBCA looks forward to continued collaboration and strong partnerships between government and industry in our collective efforts towards achieving a net zero infrastructure sector.

We look forward to working in partnership with the Australian Government, alongside industry colleagues such as ASBEC and its members, to contribute to the sector plans and other key policies. For more information on any of the above or to arrange further consultation, please contact [redacted]

Yours sincerely,

[redacted]

Davina Rooney
Chief Executive
Green Building Council of Australia