CEMENT CONCRETE & AGGREGATES AUSTRALIA

Transport and Infrastructure Net Zero Consultation Roadmap

ITSOC Industry Roundtable on low carbon concrete

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About CCAA

Cement Concrete & Aggregates Australia is the voice of the heavy construction materials industry in Australia.

CCAA membership supply around 90% Australia's cement, concrete & aggregates used to build infrastructure.

The industry generates approximately $15 Billion in annual revenues and employs approximately 30,000 Australians directly and a further 80,000 indirectly.

Foundation Members

Members


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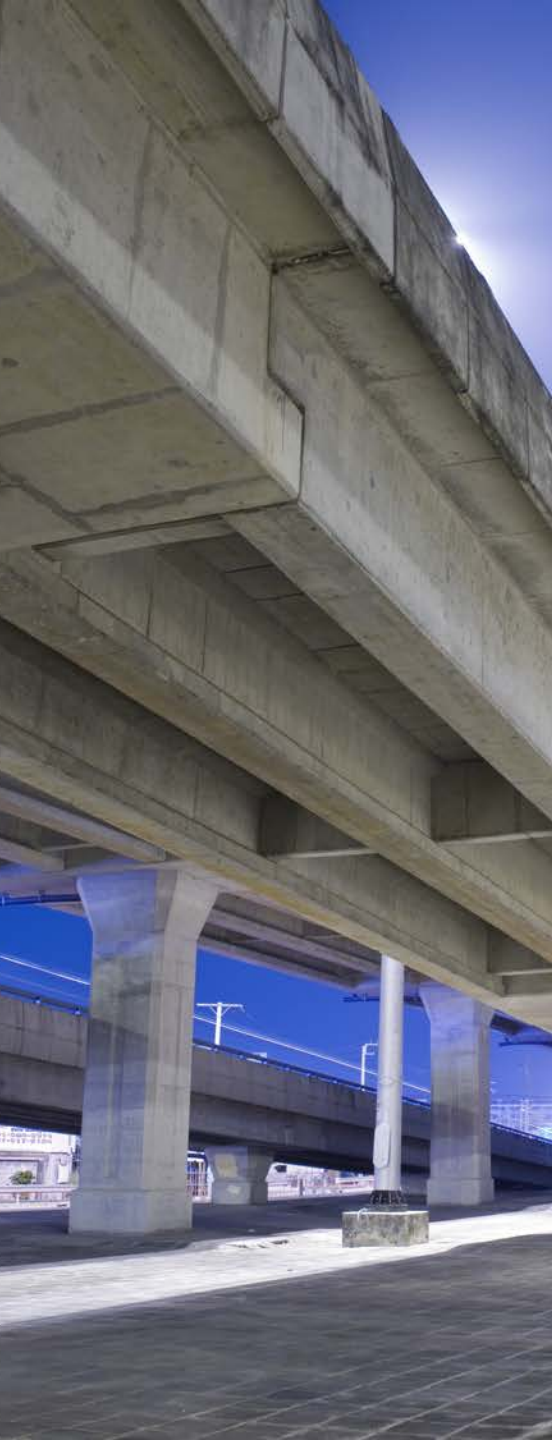
Associate Members



Summary

The Australian Cement and Concrete Sector – Key Facts

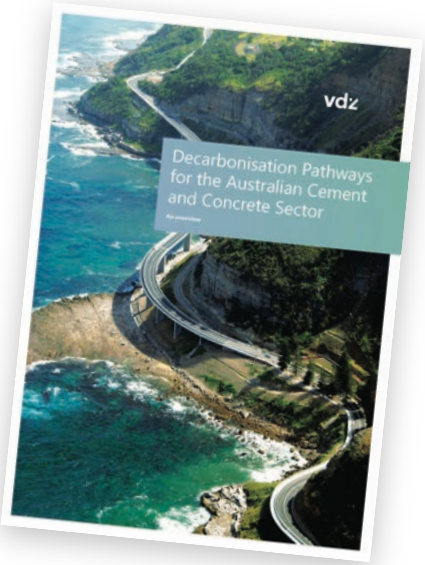
5	Integrated cement plants in Australia which produce clinker and cement as a continuous process.
60%	of the cement manufactured in Australia is produced in integrated manufacturing plants
40%	of cement involves the use of clinker which is imported and manufactured into cement at grinding facilities located around Australia's coastline
30 million m^3	ready-mixed concrete produced annually in more than 1,500 batching plants across Australia
40%	of all concrete is used for infrastructure projects
30%	of all concrete is used for commercial and non-residential buildings
30%	of all concrete is used for housing
80,000	people are indirectly employed in the whole cement, concrete and aggregate sector, compared to 30,000 who are directly employed
A$15 billion	revenue is generated by the cement and concrete sector

Background

In 2021, the Cement and Concrete industry declared its ambition to deliver net zero carbon cement and concrete to Australian society by 2050.

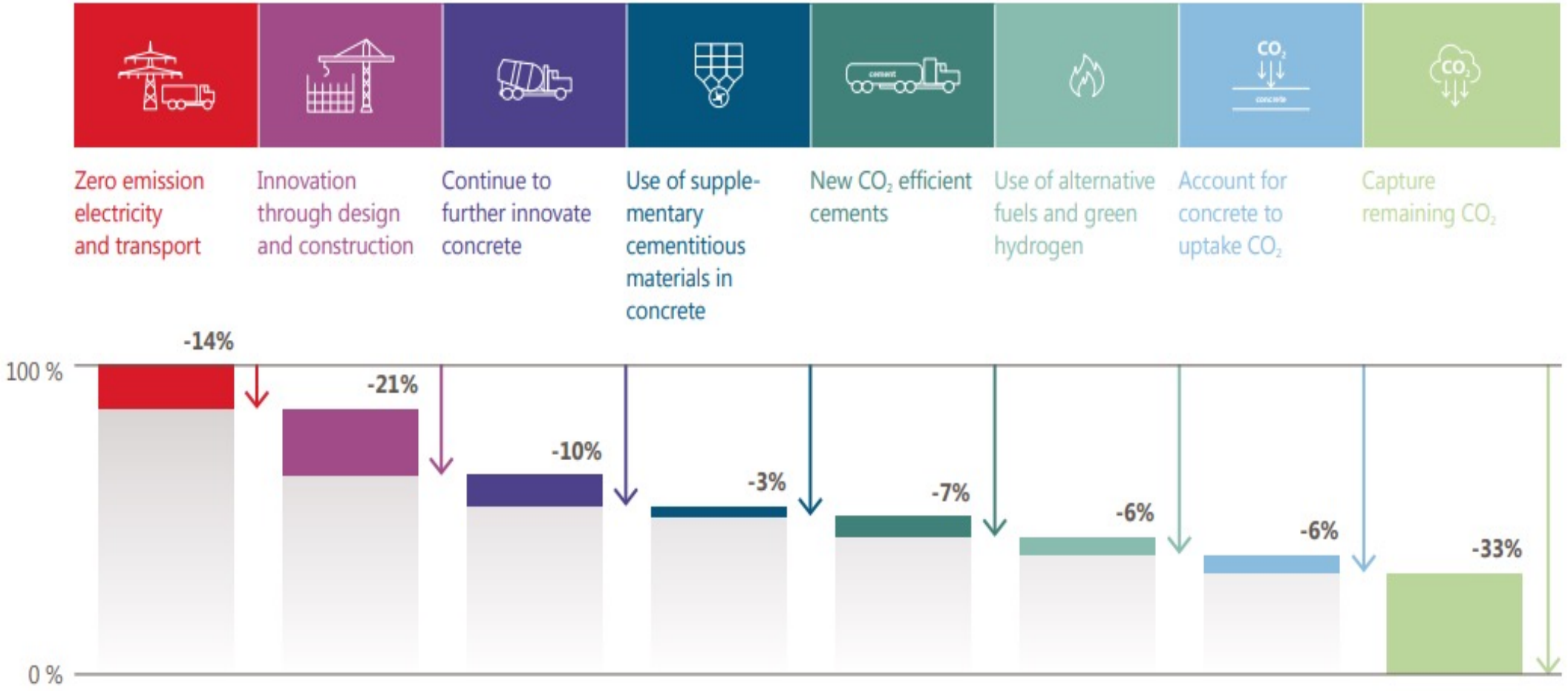
Decarbonisation Pathways for the Australian Cement and Concrete Sector (2021) has enabled a better understanding of the technologies and practices necessary to decarbonise Australian cement and concrete.

Eight Decarbonisation Pathways were identified.



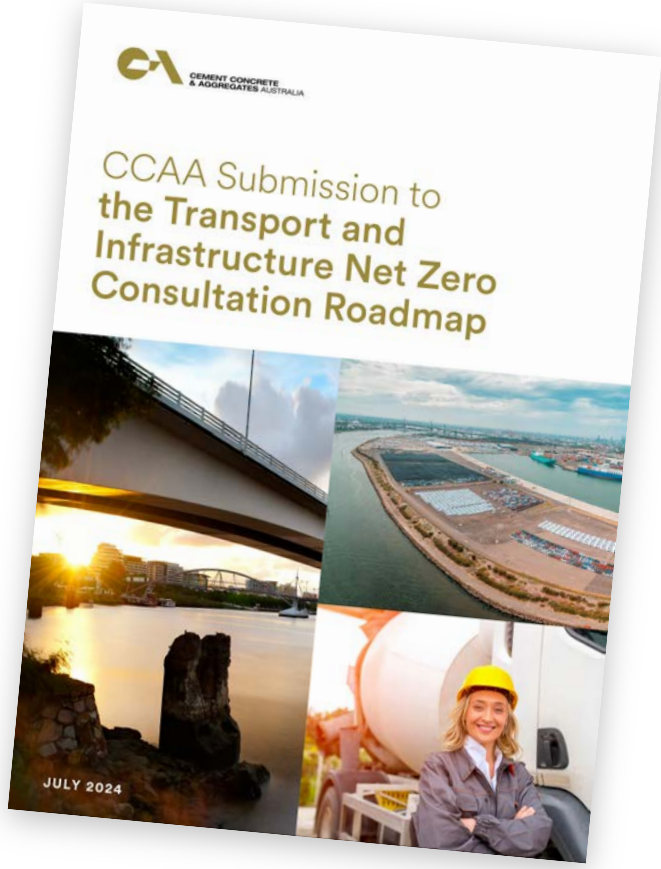
Decarbonisation Pathways for the Australian Cement and Concrete Sector Report (2021)

EIGHT DECARBONISATION PATHWAYS HAVE BEEN IDENTIFIED



CCAA's submission on the Transport and Infrastructure Net Zero Consultation Roadmap

- Whole-of-Life Carbon Approach
- Revised Standards
- Adopting Global Practices
- Material Efficiency
- Supplementary Cementitious Materials
- Supporting EPDs
- Training and Information
- Support for zero-emission vehicles (ZEVs) in the concrete supply chain, incentivise industry adoption of ZEVs, and upgrade road infrastructure to accommodate these vehicles.



Recommendations

01.

That all Government projects take a whole-of-life approach to planning, design and carbon estimates to ensure a more accurate representation of carbon, in the same way whole of life financial accounting is used today.

Recommendations

02.

That the Federal Government encourage state and territory jurisdictions to support the redesign of standards that facilitate decarbonisation, such as changes to AS3972-2010 (General Purpose and blended cements). Without substantive changes to these Australian Standards and to State transport agency specifications, decarbonising of transport infrastructure will be limited more than the technology allows.

Recommendations

03.

That the Infrastructure and Transport Ministers Meeting mandate the fast tracking of standards and specification changes by adopting standards and practices from the US and Europe.

Recommendations

04.

That all governments promote the design of building and infrastructure that includes a clear focus on material efficiency, specifying lower carbon concrete and improved construction technologies.

Recommendations

05.

That state/territory governments work towards performance-based specifications, away from specifying minimum amounts of Portland cement, and therefore promote the greater uptake of Supplementary Cementitious Materials (SCM) such as Fly Ash and Blast Furnace Slag.

Recommendations

06.

That the Federal Government introduce a national grant program, similar to the USA Environmental Protection Agency Scheme to support businesses that manufacture concrete to develop and verify Environmental Product Declarations (EPDs).

Recommendations

07.

That the Federal Government in conjunction with State and Territory governments provide training and information across the supply chain on how to use lower carbon concrete, as lower carbon concretes do not respond exactly the same as traditional concretes and pushback from project managers, contractors and placers are regularly resulting in higher carbon concretes being substituted over those originally specified.

Recommendations

08.

That the Federal Government financially incentivise State and Territory Governments for their “as built” infrastructure to meet their carbon targets for Federally funded infrastructure projects, to discourage alternative higher carbon concretes from being substituted by designers, project managers, contractors and sub-contractors;

Recommendations

09.

That the Department of Infrastructure, Transport, Regional Development, Communications and the Arts in conjunction with their state counterparts promote and provide case studies for projects that have used lower carbon cements, low carbon concretes and recycled materials;

Recommendations

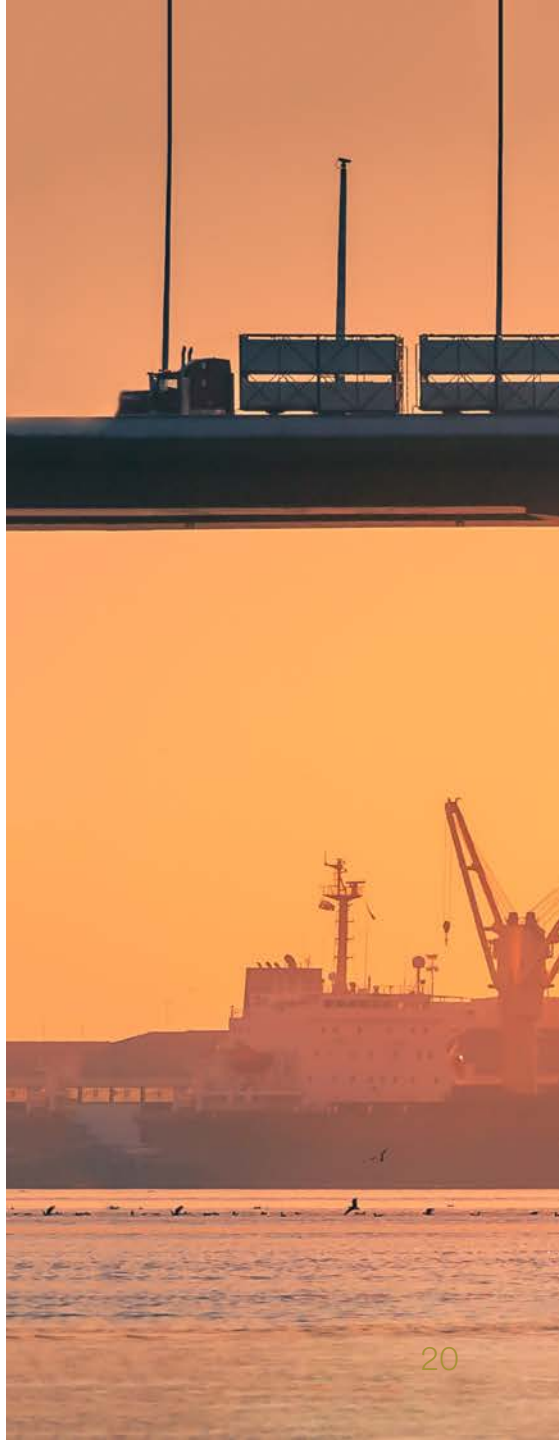
10.

That the appropriate Government agencies measure more categories of construction and demolition waste to landfill and so allow for a better understanding of how much concrete is being disposed of rather than being reused or recycled.

Recommendations

11.

That the Department of Infrastructure, Transport, Regional Development, Communications and the Arts identify the extent of road infrastructure upgrades that are required to meet the needs (particularly higher axle loadings) of different types of low and zero emission vehicles.



Recommendations

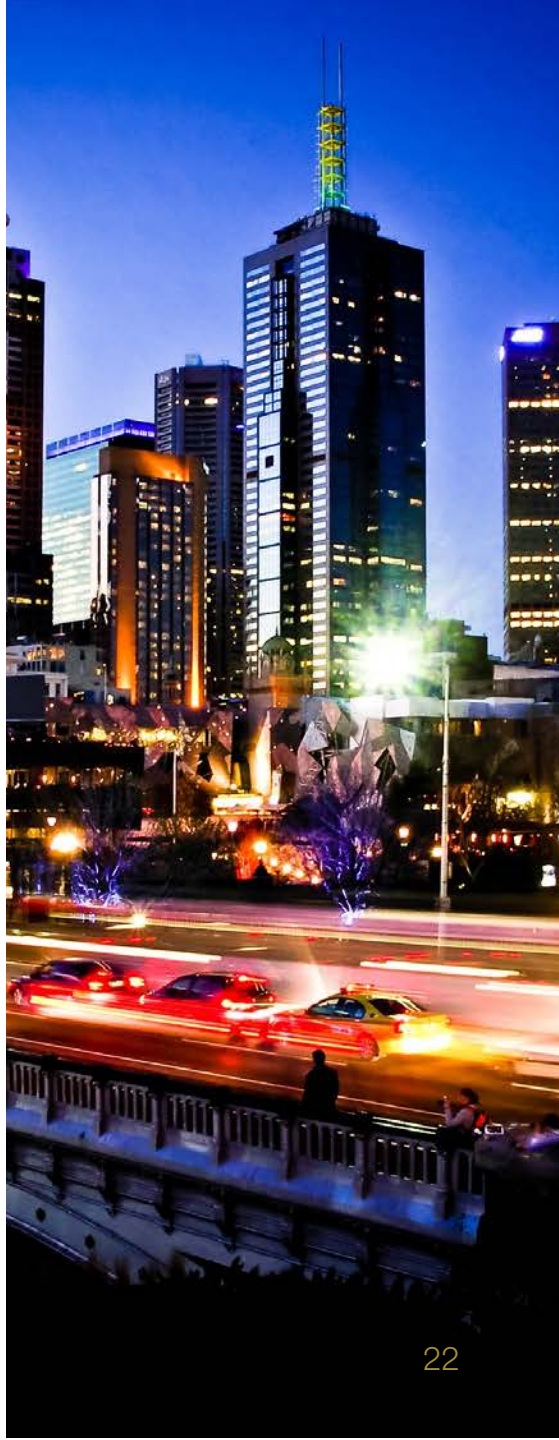
12.

That Infrastructure and Transport Ministers determine policy settings for allowing heavier zero emission concrete and aggregate delivery trucks on to every residential street in Australia, to give a clear investment signal to industry as to what types of low and zero emission heavy vehicles will be viable in the medium and long term.

Recommendations

13.

That the Federal Government set out a plan and timetable for rolling out the infrastructure that would conveniently permit the refuelling of ZEVs, irrespective of whether they are electric or FCEV (hydrogen powered) vehicles throughout the entire Australian road network.



Recommendations

14.

That the Federal Government develop incentives for industry to take up ZEVs for use in the concrete and concrete related product supply chain.

Recommendations

15.

That the Federal Government investigate the viability for biodiesel to be a transitional fuel to ZEV, given it is compatible with existing plant while potentially delivering a 60% reduction in CO2; and

Recommendations

16.

That the Federal Government encourage State Governments to establish Heavy Construction Materials Supply Plans and appropriate protections to ensure aggregate and sand resources close to demand can be protected, to minimise transport distances and associated emissions.

Thank You!

For more information go to ccaa.com