

# INDUSTRY SUBMISSIONS TO INFRASTRUCTURE AND TRANSPORT SENIOR OFFICIALS' COMMITTEE

## Decarbonisation of Infrastructure

### Roads Australia

Thank you for the invitation to submit in response to the 'Decarbonisation of Infrastructure' key issues summary for ITSOC consideration.

Roads Australia is the national peak body for roads and transport, bringing government, communities together to lead the evolution of Australia's roads, integrated transport and mobility networks. Our members include Australia's transport agencies road owners, major contractors, consultants, materials suppliers, service and technology providers across the infrastructure and transport sector.

Roads Australia welcomes working in close collaboration with governments and industry peers to support the net zero transformation of infrastructure and transport.

#### Issues:

##### **National Carbon Values for infrastructure decision making.**

###### Industry response:

- Industry welcomes a nationally consistent set of carbon values for use in transport infrastructure project decision making.
- It supports industry to provide best in market proposals, appropriately assess and allocate risk, and invest in innovation to reduce emissions across the asset lifecycle, and as technology evolves.
- Industry seeks to understand the practical application of national carbon values, how its value may change over time and how the process to establish the value compares with global best practice, so it is accounted for properly in benefit-cost ratios.
- Industry seeks to understand:
  - the methodology and process being applied during the infrastructure proposal review and assessment phase, and
  - an established transparent reduction baseline by which nationally significant land transport infrastructure assets will be assessed to ensure reductions quoted are actually achievable.

##### **Measurement of embodied emissions in infrastructure.**

###### Industry response:

- Industry welcomes a nationally consistent measure of embodied emissions in infrastructure and looks forward to the upcoming release of iNSW's embodied emissions measure and tools.
- The national harmonisation of the measurement of embodied emissions is the next critical step to support the infrastructure sector to reduce its carbon cost consistently across jurisdictions. It supports the efficient use of sector resources if firms nationally can avoid managing different requirements for different jurisdictions.

- Industry can divert efficiencies gained to improve carbon management practices and invest in innovation to meet or exceed government targets and thresholds.
- Industry would like to understand how to apply the measure of embodied carbon, so in return, it can support its promotion and application nation-wide by sharing local and global best practice.
- Develop a mechanism to provide disclosure of material (carbon) performance in a consistent manner nationally (e.g. construction products must have a form of third-party verification) to provide supply chain certainty and avoid greenwashing. E.g. [Buy Clean California Act](#). Data and evidence derived through this process can further support Australian manufacturing.

### Response to questions for industry.

The below responds to the questions posed in the key issue summary for industry.

### **What other opportunities for harmonisation of policies or guidance would support the reduction of embodied emissions in infrastructure?**

1. Opportunity to explore economy and sector wide carbon budgets at a national level for the infrastructure sector, including specifying a carbon budget for high emitting sectors such as transport. This will assist the sector to assess emission assessments against a set cap. The [UK Government](#) sets and monitors the amount of greenhouse gases the UK can emit during a 5-year period to reach the net zero target, and recommends the required [reduction per sector](#).
2. Developing a carbon data ecosystem for the infrastructure sector to enable public and private to share trusted data to monitor and manage the net zero transition. This includes nationally harmonised definitions, data standards and sharing agreements between governments and industry. (Methods to exchange trusted data is on the work program of industry collaboration, the [Infrastructure Net Zero initiative](#).)
3. Reviewing critical standards and technical specifications that inform infrastructure performance. Audit international and national standards for net zero construction to identify key performance standards the infrastructure sector needs to decarbonise. Encourage Standards Australia to prioritise a small set of critical standards with a high impact on carbon reduction to encourage greater use of recycled materials from waste and industrial by-products. For example, AS3600 2018 specifies minimum requirements for the design and construction of concrete building structures that include reinforcing steel. Updating this standard to include green concrete and pre-cast innovation to encourage greater use of recycled materials. Industry consistently report that innovation has surpassed Australian standards. Innovation on projects can be delivered but needs time.

### **Are there processes, information, limits or standards being applied in other countries or within jurisdictions that industry representatives recommend could be replicated nationally in Australia?**

The responses to questions for industry below are informed by [‘The Journey to Net Zero’](#) report developed and published by key industry bodies representing infrastructure and transport in May 2022. The [Infrastructure Net Zero](#) initiative is driving actions in support the transformation of transport systems to net zero, including net zero procurement, capacity building and pathways for sharing trusted data.

**Establish business case guidelines to strengthen early decision making that could avoid cost and carbon.**

- In line with the Commonwealth Government's recent Infrastructure Policy Statement and priorities of Productivity and Resilience, Liveability and Sustainability, early-stage guidance is required to direct which forms of infrastructure are funded and how projects are prioritised. To assess build less or build nothing, business as usual assumptions need to be tested from the outset. The National Investment Framework for Transport in Ireland is one such approach that considers investment priorities, modal hierarchy, and intervention hierarchy, with decarbonisation an investment priority. [TII-NR2040-Final-Short-Report-EN-April-2023.pdf](#)

**Adopt PAS 2080 as a consistent approach to carbon management in infrastructure planning, business case and project delivery.**

- Internationally, PAS 2080 provides a benchmark for carbon management in buildings and infrastructure across the whole value chain. It provides thorough way to explore build nothing or low build solutions into decision-making across the value chain (from planning to end of life) to tackle carbon reduction systemically.
- It's an industry-led standard, targeted at leaders across the value chain, from asset owners, to designers, constructors, and material suppliers.
- It enables government/industry to address the carbon implications of end-of-life, refurbishment, renewal and decommissioning which are not currently well considered in decision-making frameworks and guidance but could be considered if following PAS 2080 guidance.

**Are there existing processes or policies from governments that inhibit the use of low carbon building materials in transport infrastructure projects?****Enable projects to have more time at planning phase so that real change can happen.**

- Additional time at planning stage will enable the industry to change construction practices (e.g. modular construction), scale up pilot technologies, establish new supply chains, test new materials, consider nature-based solutions and establish digital environments. Too often, projects are rushed through planning into delivery.

**Are there more effective ways governments can work with industry to cooperate on our decarbonisation of infrastructure aims?****Use government buying power to accelerate industry transition.**

- Australian state and territory governments could aggregate demand across projects to secure investment into hard-to-abate industry sectors and capital intensive low-emissions technologies.
- These include prefabrication/manufacturing (something jurisdictions are keen to explore e.g. Victoria and Queensland), electric plant and equipment, hydrogen logistics, green steel and low carbon alternatives to cement. [Victoria's ecologiQ](#) and [Recycled First Policy](#) are examples of this.

**Provide nationally consistent guidelines for government procurement for net zero construction.**

- Australia could adapt the [UK Government's Construction Playbook](#), which aims to drive industry reform, including carbon reduction, through procurement actions. The Playbook sets out what is expected (and what it will contract for) from industry, including continuous improvement in building and workplace safety, cost, speed and quality of delivery, greater sharing of better data, investment in training the future workforce through upskilling and apprenticeships, and adoption of the UK's information management framework. To support this, suppliers should pass the principles and policies set out in this Playbook down through the supply chain.

**Agree nationally consistent data frameworks and interoperable digital systems to support rapid learning.**

- Digital technologies enable better tracking and visibility of the emissions embodied in the supply chain, leading to more responsible or sustainable supply chain management practices.
- Digital technologies, such as digital twins or carbon twins also make the tracking of carbon easier and provide a platform for testing different low carbon design choices. Government could set targets and information frameworks mandate or incentivise innovation and digital engineering in design.

**Priorities/themes for your organisation:**

Roads Australia recently held its annual National Transport Alignment Roundtable with transport secretaries, national bodies CEOs and the Roads Australia Board.

The decarbonisation of the transport economy is a key policy area of national alignment for public and private sector members.

The aim is to reduce the carbon cost of Australia's transport infrastructure sector to the community through support to the Transport and Infrastructure Net Zero Roadmap and Action Plan, demonstrating best practice and actively leading initiatives with partners and members to support government, industry and supply chains to achieve net zero.

Future industry engagement sessions of high value could include:

- transacting for net zero
- developing a trusted data ecosystem
- exploring a carbon budget for the transport economy; and
- tracking net zero performance nationally.

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