

15 September 2025

Submission on the Productivity Commission's Interim report:

Investing in cheaper, cleaner energy and the net zero transformation

About Arup and its energy work

Arup is a global built environment consultancy providing advisory and technical expertise for our clients across more than 150 disciplines. We collaborate with our clients and partners to create safe, resilient, and regenerative places and shape a better world.

Arup's 6,400+ strong Asia Pacific workforce works with clients and collaborators across Australia and New Zealand, East Asia and Southeast Asia, using technical expertise to unlock solutions to some of society's most complex challenges, including facilitating the renewable energy transition, responding to the climate change emergency, decarbonisation of transport systems, planning resilient and inclusive future cities, and protection and restoration of the natural environment.

As an independent firm owned in trust by our members, we invest a percentage of profit into our research and innovation program each year to support our commitment to making a meaningful contribution to the UN's Sustainable Development Goals.

Unlocking productivity in infrastructure and construction delivery and facilitating the energy transition are two of our biggest priorities. Hence our desire to contribute to solving the challenges we address around accelerating energy infrastructure approvals.

At Arup, we're helping clients across the world to make the transition to decarbonised, secure and affordable energy. A successful energy transition requires collaboration across disciplines, sectors, and countries. Arup is helping clients to plan for a new energy future, undertaking in-depth scenario planning to support a resilient energy transition at the country and city level. Our work focuses on both the network-wide mix of new energy generation to implementation of specific sources.

Our approach is multidisciplinary from the start. We carry out feasibility studies and master planning of new generating capacity and infrastructure, as well as the core technical engineering of new systems. We also partner with leading organisations to research future energy scenarios and support the development of the industry. Our Australasia energy business is flourishing, leveraging our expertise in engineering, strategy, policy advisory, circular economy and climate change across the region. We are at the forefront of innovative thinking in the energy transition, acknowledging the comprehensive challenges of achieving a net-zero world.

This is our response to the Productivity Commission's Interim Report on Investing in cheaper, cleaner energy and the net zero transformation. We would be pleased to provide further information on more discrete projects, associated research or any additional details on any references.

Chapter 1. Reducing the cost of meeting emissions targets

Draft recommendation 1.3 Introduce an emissions-reduction incentive for heavy vehicles and phase out policy overlaps for light vehicles

Arup endorses the PC including in its energy transition priorities incentives for heavy vehicle transport emissions reduction (including rail and aviation, though we believe maritime and ports also needs close consideration).

Arup has surveyed the decarbonisation technology needs and potential for the critical 2030-2040 period and we believe these should help guide the near-future imposition of incentives and disincentives to the various fuels and technologies.

For **heavy road vehicles**, Arup sees accelerating potential for battery electric and (given adequate market and government support) hydrogen fuel cell adoption. Low carbon liquid fuels (LCLF) are best applied to hard-to-electrify situations, as a fall-back (infrastructure provision is challenging).

EV application to **light road vehicles** is already well underway, with charging infrastructure development the near-term priority. Alternatives such as hydrogen fuel cells are not generally applicable.

For **rail**, Arup sees most mid-term upside in hybrid diesel/electric and battery electric modes, which are already progressing, and (again, given adequate support) hydrogen fuel cells. Low Carbon Liquid Fuel deployment including renewable diesel requires local industry development and are an important decarbonisation option for long haul rail.

In **maritime**, Low Carbon Liquid Fuel technology is ready-to-deploy for long-range vessels (85% of transition cost arises from land-side infrastructure and fuel production capacity) and synthetic LCLF, like methanol, needs to be developed to commercial scale and viability. Developing adequate onshore power supply to support vessel operation in port is critical to decarbonising the maritime sector. Arup supports the International Maritime Organisation's Net Zero Framework as an efficient means of decarbonising the shipping industry.

In **aviation** Sustainable Aviation Fuel (SAF) is already being implemented and there is strong potential for developing a local production industry. The commercial viability of battery electric and hydrogen fuel cell applications for short-range flights needs to be demonstrated.

Arup strongly supports a reformed 'road user charge' that encompasses all vehicle types, not just a per kilometre tax on EVs. But government policy design must avoid a road charging approach that clashes with EV subsidisation. It needs to be borne in mind that transport decarbonisation is one part – a critical part – of the overall drive to net zero.

The Interim Report, in dealing with transport emissions, considers only financial incentives and disincentives for heavy road transport to decarbonise. Arup's view is governments need to lead and incentivise infrastructure development for decarbonisation, alongside suitably-tailored financial incentives. In terms of road transport, we note that diesel combustion accounts for around 17 per cent of total national carbon emissions (transport, mining, agriculture etc). This is the subject of a new report, [Decarbonising diesel industries](#) by the Australian Academy of Technological Sciences & Engineering (ATSE). ATSE recommends that, as well as removing or reforming the Fuel Tax Credits Scheme, there should be created a Future Diesel Strategy aligned with national net-zero objectives. That would support, among other things, rapid development of production and utilisation of renewable diesel and

other biofuels to replace conventional diesel fuel. Arup recommends this approach and supports the adoption of LCLF as a pathway to decarbonisation in hard to abate transport sectors.

Chapter 2. Speeding up approvals for new energy infrastructure

Arup strongly endorses the PC's thinking in Chapter 2 and supports its recommendations, with some amplifications. The Commission recognises the imperative case for accelerated, more efficient project approvals systems that also enhance environmental protections; clear prioritisation of nationally-important energy projects; shifting to regionally-based planning; accessible, reliably high-standard knowledge sharing between proponents, communities and regulators; and the pressing case for Environment Protection and Biodiversity Conservation Act (EPBC) reform, coupled with an understanding that state and territory, and local government processes must mesh with an improved EPBC Act and new national environmental standards. Arup recommends South Australia's approvals framework as best practice, which should be used as a template by other jurisdictions. And, critically, acknowledgement that clean energy projects must earn and retain social licence which, as Arup stressed in its initial submission, requires early commitment by proponents to environmental considerations and community engagement in project planning.

Draft recommendation 2.1 Reform national environment laws

Arup supports the recommendation that EPBC reform includes clear, enforceable environmental standards emphasising the need for state and territory approvals processes to explicitly align with national standards, which requires thorough consultation with those jurisdictions during development of the federal reforms.

Arup strongly supports regional environment planning (and, as in our first submission, regionally-focused strategic assessment) and prioritisation of regional plans within Renewable Energy Zones. Arup believes the regional assessment approach should also apply to offset arrangements and supports a re-thinking of the prioritisation of direct offsets in the current EPBC Act. Arup considers that Australia has built a world class environmental market governance infrastructure to ensure the integrity of the Australian Carbon Credit Unit Scheme and the Nature Repair Market, with legislation, regulation, standards and market rules overseen by the Clean Energy Regulator.

Arup believes Australia should avoid the error of some carbon markets elsewhere: separating mandatory and voluntary systems for emissions reduction and carbon sequestration. The consequence of this separation has been to undermine the actual and perceived integrity of carbon credits from nature-based projects.

Arup therefore supports the PC recommendation for removal of the prohibition on the use of the Nature Repair Market for offsetting. The recommendation could enable the development of rules and policies that can apply equally across both regulated and voluntary markets, increasing efficiency and integrity.

We also support the PC's recommendation that '[a]n Australian Government offsets scheme should be governed by rules and policies that support the scheme's integrity'. In the UK, Arup has been involved in the Nature Markets Dialogue, a collaboration between business, finance, and environmental organisations, that looked closely at ensuring nature market integrity. The [key findings and proposal from the UK Dialogue](#) published in June 2025 is a useful reference for Australian rules and policies to build on our world class market governance infrastructure.

Draft recommendation 2.2 Specialist ‘strike team’ for priority projects

Arup endorses this approach both for bringing an expedited, specialist focus and managing a fast pathway for nationally significant projects. Arup notes that in the current EPBC system, a significant cause of project delay occurs at the gateway stage of determining whether or not a project is a controlled action. Arup believes that a strike team approach should start dealing with proposed projects before determination of controlled action, and specifically to expedite the gateway stage of the process. Once projects have been approved through the process, Arup recommends the strike team continues to monitor to ensure efficient and timely project implementation. Arup supports also having state and territory strike teams, prioritising nationally significant projects and working to eliminate process duplication.

The effectiveness of the Commonwealth's major projects status needs to be reconsidered and a strike team needs to be empowered to resolve conflicts between awarding of major projects status and other regulatory provisions. For example, the Seadragon offshore wind project in Victoria was awarded major project status by both the Commonwealth and the State. In spite of this, Seadragon failed to win a feasibility licence because of a regulatory technicality. That situation should not happen again.

Draft recommendation 2.3 Establish a Coordinator-General for priority projects

Arup emphasises again the importance of Commonwealth/state & territory cooperation being coordinated by the proposed Coordinator-General.

Draft recommendation 2.4 Consider the energy transition in approval decisions

Arup views the proposed EPBC Act reform can only achieve full capability when it enables the alignment of energy transition with national climate change and decarbonisation policies.

3. Addressing barriers to private investment in adaptation

Draft recommendation 3.1 Set up a climate risk information database covering all climate hazards

Arup strongly supports this recommendation. Arup believes there must be government/private sector collaboration, in sharing climate data holdings to ensure all parties have access to comprehensive, consistent data, so everyone works from the same information. This is critical to collaboration between all levels of government and between government and the private sector. Establishing a granular national climate risk database needs to recognise that business, communities and government will be able to make better decisions if they are able to draw on the same information to have hard conversations around adaptation. Arup believes Australia significantly lags Western Europe and North America in developing comprehensive, consistently reported, granular database systems. Arup believes federal and state governments should look to those models to develop their data gathering and sharing systems.

Draft recommendation 3.2 Develop a nationally consistent climate resilience rating system for housing

Arup believes that before a nationally climate resilient rating system for housing can be usefully deployed, governments, the insurance industry and financiers need to prepare themselves and householders for the challenges that climate adaptation will demand. This is particularly important in dealing with established housing. Applying national resilience standards to the development of new dwellings and suburbs is relatively straightforward. Arup proposes an Australian Climate Housing Transition Strategy, dealing also with supporting and surrounding infrastructure. The strategy needs to address as a fundamental issue how climate adaptation of existing housing is to be funded.