ARENA Submission to the Productivity Commission

Investing in Cheaper, Cleaner Energy and the Net Zero Transformation

15 September 2025

Australian Government
Australian Renewable Energy Agency

ARENA

Executive Summary

ARENA welcomes the Productivity Commission's Interim Report (*Investing in Cheaper, Cleaner Energy and the Net Zero Transformation)* and supports its focus on reducing emissions at least cost, accelerating energy infrastructure approvals, and addressing barriers to private investment.

The renewable energy transition is central to Australia's future productivity and comparative advantage in a carbon-constrained world. As the world moves towards net zero, Australia will have enormous future opportunities to tap its renewable energy endowment to underpin future economic productivity, competitiveness and resilience.

As the agency charged with advancing Australia's renewable energy innovation, ARENA offers the following submission to inform the interim report, drawing on our experience funding over 788 projects over 13 years and our strategic insights into the commercialisation of renewable energy technologies, system-wide efficiency, industrial competitiveness and innovation financing.

Summary of ARENA's Response to Interim Report Recommendations

ARENA's submission focuses on Section 1 and Section 2 of the Interim Report, with specific attention to Recommendations 1.1 through 1.3.

- On the **set of recommendations as a whole**, ARENA notes that incentives should be strategically designed and focused to unlock least-cost decarbonisation pathways and capture economic opportunities in a net zero world.
- On recommendations in **Section 2**, ARENA supports industry calls for more streamlined approval processes and expedited approvals for renewable energy projects, and endorses recommendations to reform environmental approval processes.
- On **Recommendation 1.1,** we support the PC's call to ensure long-term, well-designed policies, incentives and market settings post-2030 for investment in clean energy generation.
- On **Recommendation 1.2**, we support improving incentives to reduce emissions in heavy industry, including policies that encourage earlier adoption of low-emissions and more energy efficient technologies and supporting industry in meeting Australia's emissions targets.
- On **Recommendation 1.3**, we suggest that a suite of complementary 'push' and 'pull' policy levers, such as the New Vehicle Efficiency Standard and consumer-based incentives, should remain in place whilst the zero-emission vehicle market continues to mature.

About ARENA

The Australian Renewable Energy Agency (ARENA) is the Commonwealth's dedicated innovation agency for renewable energy. Established under the *Australian Renewable Energy Act 2011*, ARENA's mission is to support the global transition to net zero emissions by accelerating the pace of pre-commercial innovation, to the benefit of Australia.

ARENA's purpose is to improve the competitiveness and increase the supply of renewable energy, and to support the uptake of energy efficiency and electrification. This is achieved through targeted financial assistance and knowledge sharing, enabling innovation that benefits all Australians and supports the achievement of national emissions reduction targets.

ARENA's investment approach is guided by its General Funding Strategy (GFS), which outlines five strategic priorities for 2024–25 to 2026–27:

> Unlock ultra low-cost solar (ULCS)
> Optimise the transition to renewable electricity
> Commercialise renewable hydrogen
> Support the transition to low emissions metals
> Decarbonise transport.

These priorities reflect ARENA's commitment to high-impact, long-term innovation, with a focus on commercially viable solutions for hard-to-abate sectors. ARENA provides financial assistance in the form of grants. The agency maintains a diverse portfolio across the innovation lifecycle—from early-stage R&D to pre-commercial deployment. The agency's strategy-led Investment Plan provides a framework for ARENA to focus it effort.[1]

ARENA seeks to maximise the impact and value of the projects we fund through robust assessment processes, focusing on strategic priorities that deliver long-term outcomes, provide significant contributions to the energy transition, and address areas of current market need where support is additional and can accelerate progress in Australia.

ARENA's impact is demonstrated through its portfolio of over 788 projects and more than $3 billion in funding commitments. These projects have unlocked over $14 billion in private sector investment and advanced the technological and commercial readiness of clean energy solutions. In 2024, ARENA received an additional $7.1 billion under the Future Made in Australia package to support priority sectors including renewable hydrogen, green metals, low-carbon liquid fuels, critical minerals processing and clean energy manufacturing.

ARENA is responsible for delivering targeted Budget Measure programs such as:

[1] ARENA Investment Plan (2024)

- Solar Sunshot
- Hydrogen Headstart
- Battery Breakthrough Initiative
- Future Made in Australia Innovation Fund
- Industrial Transformation Stream (Powering the Regions Fund)
- First Nations Community Microgrids (Regional Microgrids Program).

The energy transition offers a once-in-a-generation opportunity to work with First Nations people to build economic opportunity for projects on Country. In all its work, ARENA is committed to meaningful engagement with First Nations communities, embedding benefit-sharing and cultural capability into its relevant programs and governance.

ARENA Response to Interim Recommendations

We have set out our reactions to draft **Recommendations 1.1, 1.2, 1.3** and **Section 2,** at a high level and remain available to work with the Productivity Commission to provide examples, data and details that have informed our views.

Section 1: Reducing the cost of meeting emissions targets

Draft recommendation 1.1 | *Reducing emissions in the electricity sector after 2030*

ARENA supports the PC's call to ensure well-designed policies, incentives and market settings post-2030 for investment in clean energy generation, moving towards nationally consistent approaches. We agree that wind and solar generation have levelised costs lower than any other fuel source, but that further incentives for clean energy generation will likely be necessary to meet Australia's decarbonisation goals. Long-term signals allow capital allocation with higher confidence and lower risk, reducing the overall costs of the transition.

Consistency across jurisdictions also reduces complexity, improves efficiency and enhances Australia's ability to attract both domestic and international capital. As an example, unlocking Australia's vehicle-to-grid opportunity requires compliance with differing grid connection requirements, smart grid architecture (e.g. CSIP-AUS) implementation and interoperability standards.[2] This degree of cross-jurisdictional inconsistency increases complexity and cost for innovators and networks looking to harness this opportunity.

[2] National Roadmap for Bidirectional EV Charging (2025)

To ensure incentives deliver the most impact, incentives should be *targeted* toward areas where Australia holds a long-term comparative advantage. Targeting incentives enables resources to concentrate on the technologies and applications that are most likely to deliver significant emissions reductions, demonstrate scalability and achieve commercial viability in the near-to-medium term. Conversely, incentivising technologies or sectors where Australia is unlikely to hold a comparative advantage risks directing Australia's capital and human resources into areas that will not deliver an increase in national wealth and undermine the efforts required to succeed in areas where Australia could prosper.

This is consistent with ARENA's strategy-first investment approach, under which funding is targeted toward clearly defined priority investment areas based on analysis of Australia's emission abatement opportunities and the pathway to net zero.3 By doing so, ARENA helps to provide greater market certainty and a pathway for the deployment of technologies with the greatest potential to cut emissions at scale, lower costs and deliver on Australia's clean energy ambition.

Draft recommendation 1.2 | *The Safeguard Mechanism should cover more industrial facilities and carbon leakage provisions should be improved*

ARENA supports the PC's direction of improving incentives to reduce emissions in heavy industry, including through policies that incentivise and smooth the industrial transition. Such measures support earlier adoption of low-emissions and energy-efficient technologies, increasing demand for solutions supported by ARENA and helping industry contribute to Australia's emissions goals.

Even with strengthened policy positioning, it is likely that further targeted support will be needed to accelerate decarbonisation and reduce the costs of transition. ARENA's strategy-first investment approach prioritises sectors and technologies with the greatest potential to unlock the abatement needed to meet Australia's decarbonisation goals. Our knowledge sharing approach, where lessons learned from early projects are rapidly disseminated to key industry players, helps prospective technologies scale, and helps inform an efficient allocation of capital towards industrial decarbonisation.

[3] ARENA Investment Plan (2024)

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

A suite of focused and complementary policy mechanisms is required to support decarbonisation of the road transport sector, set to be the largest source of emissions by 2030.[4]

Existing Federal, state and territory policies for light vehicles have been effective in accelerating the uptake of passenger electric vehicles, bringing them closer to cost parity in Australia.[5] In this context, a staged rebalancing of policy support is appropriate to ensure that incentives evolve in line with market maturity.

ARENA agrees with the PC that incentives should remain part of the policy mix to encourage EV uptake and suggests that a balanced mix of 'push' and 'pull' mechanisms delivers stronger outcomes than either alone. The New Vehicle Efficiency Standard and consumer purchase incentives should remain in place until their respective policy objectives are achieved. We also agree that decarbonisation of the heavy vehicle sector remains at an earlier stage of transition, and further early trials and research are required to identify which policy mechanisms will most effectively support the uptake of low- and zero-emissions trucks.

Section 2: Speeding up approvals for new energy infrastructure

Draft recommendations 2.1 – 2.4

ARENA supports additional measures to expedite approvals for clean energy projects and endorses calls for reform to the environmental approval processes. A more holistic and streamlined approach to planning and approvals is required, with current timelines proving too long. For example, the average approval time for large-scale renewable projects in New South Wales is 746 days.6

Without a step-change in whole-of-system efficiency, Australia risks losing competitiveness in downstream industries such as green steel and aluminium. This requires faster and more coordinated approvals, reduced idle capital, increased labour productivity, improved performance of core technologies, and greater use of modular and standardised designs.

[4] National Electric Vehicle Strategy (2023)
[5] National Electric Vehicle Strategy annual update 2023–24 (2024)
[6] RenewMap | Not all renewable projects are created equal: Why approval times vary dramatically across Australia (2025)

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