Outlook

Re: For sign off: P5 inquiry report [SEC=OFFICIAL]

From Barry Sterland s 22 @pc.gov.au>
Date Tue 7/22/2025 4:27 PM
To Martin Stokie s 22 @pc.gov.au>; Danielle Wood s 22 @pc.gov.au>; Lou Will [redacted] @pc.gov.au>
Cc Lisa Studdert s 22 @pc.gov.au>; Climate change and energy [redacted] @pcgov.onmicrosoft.com>; s 22 @pc.gov.au>; Anna Heaney s 22 @pc.gov.au>

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s 22 (1)(a)(ii)

s 47C

Barry

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From: Martin Stokie s 22 @pc.gov.au>
Sent: Tuesday, July 22, 2025 4:00 pm
To: Danielle Wood s 22 @pc.gov.au>; Lou Will s 22 @pc.gov.au>
Cc: Lisa Studdert s 22 @pc.gov.au>; Barry Sterland s 22 @pc.gov.au>; Climate change and energy s 22 @pcgov.onmicrosoft.com>; s 22 @pc.gov.au>; Anna Heaney s 22 @pc.gov.au>
Subject: RE: For sign off: P5 inquiry report [SEC=OFFICIAL]

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Thanks Dani
We should be able to accommodate most of these and I think the point on RUC has already been made.
I'll talk with Lou and Barry is with you tomorrow so between us I'm sure this can work.
Martin

Martin Stokie | Commissioner | s 22
Schedule a meeting | Chat on Teams

From: Danielle Wood s 22 @pc.gov.au>
Sent: Tuesday, 22 July 2025 3:56 PM
To: Lou Will s 22 @pc.gov.au>
Cc: Lisa Studdert s 22 @pc.gov.au>; Barry Sterland s 22 @pc.gov.au>; Martin Stokie s 22 @pc.gov.au>; Climate change and energy s 22 @pcgov.onmicrosoft.com>; [redacted] @pc.gov.au>; Anna Heaney s 22 @pc.gov.au>
Subject: RE: For sign off: P5 inquiry report [SEC=OFFICIAL]

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Huge effort thanks Lou and pillar 5 team. It's looking very good. Thanks for picking up the various strands of Commission feedback.

Just a couple of things from me

s 22 (1)(a)(ii)

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Other point

- Table on page 22 – unsure about truck dot point 'RUC would fail in its intended purpose if it reduced emissions'. Suggest 'current charges are only to recover the cost of road use and damage' .

s 22 (1)(a)(ii)

[redacted]

[redacted]

[redacted]

Danielle Wood | Chair | s 22 [redacted]
Schedule a meeting | Chat on Teams

From: Lou Will <s 22 [redacted]@pc.gov.au>
Sent: Monday, 21 July 2025 7:48 PM
To: Danielle Wood s 22 [redacted]@pc.gov.au>
Cc: Lisa Studdert s 22 [redacted]@pc.gov.au>; Barry Sterland <s 22 [redacted]@pc.gov.au>; Martin Stokie <s 22 [redacted]@pc.gov.au>; Climate change and energy s 22 [redacted]@pcgov.onmicrosoft.com>; s 22 [redacted]@pc.gov.au>; Anna Heaney s 22 [redacted]@pc.gov.au>
Subject: For sign off: P5 inquiry report [SEC=OFFICIAL]

OFFICIAL

Hi Dani

With many thanks to the team (including Martin and Barry), sending through the latest draft of the P5 inquiry report for your review and sign off.

Doc is linked here and attached.

Cheers
Lou

Executive summary

Reducing emissions from greenhouse gases is an important national priority. It comes with costs, but these can be minimised with careful policy design, freeing resources for more productive activities and enabling gains in productivity and living standards.

To achieve net zero at least cost, Australia needs consistent and comprehensive incentives to reduce emissions. Governments should fill policy gaps, remove overlaps and ensure incentives are neutral towards which technologies can achieve reductions, and in which states and territories. Priorities for action include:

- introducing enduring, broad-based market settings in the electricity sector to reduce emissions after 2030
- expanding the Safeguard Mechanism to include more industrial facilities
- new, technology-neutral policy settings to incentivise reductions in emissions from heavy vehicle users.

The cost-effectiveness of policies should be regularly assessed, and policy settings amended as needed to ensure they are consistent with an efficient emissions-reduction pathway.

It takes too long to develop energy infrastructure. Faster approvals would reduce emissions, lower costs for developers, attract investment and make energy cheaper than otherwise – supporting productivity growth.

Governments can do much without compromising either the energy transition or the environment. Overdue reforms to national environmental laws – to introduce national environmental standards, facilitate regional planning, make offsetting more efficient and clarify engagement requirements – are a priority. The law should also be changed to allow EPBC Act decision-makers to consider the fact that a project is important to Australia's clean energy transition.

Regulatory resources should be focused on assessing important energy projects. A well-resourced strike team within DCCEEW with strong clean energy capability should be dedicated to high-priority national projects, and a Coordinator-General should work within and across governments to break through roadblocks and keep approvals on track.

Australia faces significant climate-related risks regardless of future emissions reductions. Over the longer term, boosting our resilience to climate perils has the potential to lower the costs of disaster recovery. Productivity benefits will also flow from a healthier population, and our quality of life will improve.

Housing warrants specific policy attention. Large organisations likely have strong incentives and capacity to invest in resilience, and some face obligations regarding disclosure of the risks they face and how they are addressing them. The Australian Government can support household action by leading the development of a publicly accessible database of all climate hazards, and an outcomes-based resilience rating system for housing and guidance on how to act.

All levels of government have an interest in making our housing more resilient. They should work together to agree on quantifiable goals for improving housing resilience over the coming decades, and targeted policies to achieve those goals. To support economy-wide adaptation, the Australian Government should legislate for the Climate Change Authority to take on responsibility for monitoring, evaluation and learning in adaptation policy.

Draft recommendations

Draft recommendation 1.1

Reducing emissions in the electricity sector after 2030

Governments should prioritise introducing enduring, broad-based market settings in the electricity sector beyond 2030. The settings should:

- create nationally consistent incentives for lowest-cost clean energy, irrespective of generation technology or jurisdiction
- embed investment incentives to ensure reliability and system security are maintained.

Governments should also phase out any jurisdictional- and technology-specific incentives over time.

Draft recommendation 1.2

The Safeguard Mechanism should cover more industrial facilities and carbon leakage provisions should be improved

The Australian Government should lower the Safeguard Mechanism threshold so that it covers more industrial facilities. The Safeguard Mechanism review scheduled for 2026-27 should determine the new threshold but favour broadening the scheme as much as possible. The review should also consider whether the lower threshold would introduce inefficiencies such as uneven coverage in some sectors, and whether it would be appropriate to phase in the inclusion of new facilities. If the review identifies no major countervailing considerations, reducing the threshold from 100,000 tonnes to 25,000 tonnes of carbon dioxide equivalent per year would be reasonable.

If the Australian Government introduces a border carbon adjustment, it should phase out trade-exposed baseline-adjusted status for Safeguard Mechanism facilities that would otherwise be exposed to competition from imports from countries without domestic policies to reduce emissions.

Draft recommendation 1.3

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

The Australian Government should introduce a new emissions-reduction incentive to cover heavy vehicles. The incentive should be as technology-neutral as possible, meaning that it should create the same incentive to reduce emissions by switching from fossil fuels to electric vehicles, low-carbon liquid fuels or any other method to reduce emissions.

Now that the Australian Government has implemented the New Vehicle Efficiency Standard, it should phase-out the exemption of electric vehicles from the Fringe Benefits Tax, and state and territory governments should phase-out the exemption of electric vehicles from vehicle stamp duty.

Draft recommendation 1.4

Apply frameworks to achieve emissions targets at least cost and improve transparency

The Australian, state and territory governments should improve the transparency of emissions-reduction policies by consistently including estimates of their cost-effectiveness in impact analyses. Those estimates should routinely be assessed against agreed national carbon values.

The Australian Government should:

- task an independent agency with relevant expertise with developing national carbon values. These values – estimates of the implied carbon prices needed to meet Australia's emissions targets – should be used consistently as policy benchmarks across government and in regular reporting on the cost-effectiveness of emissions-reduction policies
- design and evolve policy settings to be broadly aligned with these carbon values.

To support achieving net zero in 2050 at as low a cost as possible, the Australian Government should:

- develop a framework for extending emissions-reduction incentives to new sectors. The costs associated with any new policies to reduce emissions in areas like agriculture and household gas should align with the target-consistent carbon values
- continue work to ensure ACCUs are high integrity and seek to integrate ACCUs into every national emissions-reduction policy in the long term so hard-to-abate emitters face consistent incentives.

Draft recommendation 2.2

Reform national environment laws

The Australian Government should reform environment laws to expedite approvals for clean energy projects and better protect the environment. The reforms should:

(1) introduce national environmental standards
(2) facilitate regional planning, particularly within renewable energy zones, with stricter statutory deadlines for assessing projects in 'go zones'
(3) provide accessible, high-quality information about the environment and past assessment decisions
(4) make offsetting arrangements more efficient, such as by enabling developers to meet their offset obligations by contributing to an Australian Government offsets funds
(5) set clear expectations about engagement with local communities and Aboriginal and Torres Strait Islander people.

Draft recommendation 2.3

Set up a specialist 'strike team' for priority projects

The Department of Climate Change, Energy, the Environment and Water should set up a strike team focused on priority renewable energy projects. The strike team should:

(1) be adequately resourced to ensure all priority projects can be efficiently assessed under the Environment Protection and Biodiversity Conservation Act 1999 (Cth)
(2) integrate environmental and clean energy expertise
(3) be issued with clear expectations, tools and escalation procedures
(4) work with state and territory counterparts to reduce duplication and share information and expertise.

Draft recommendation 2.3

Establish a Coordinator-General for priority projects

The Australian Government should establish an independent Clean Energy Coordinator-General for priority renewable energy projects. The Coordinator-General should:

(1) track the progress of all approvals needed to start construction
(2) investigate and help resolve delays
(3) report on progress to the Energy and Climate Change Ministerial Council
(4) provide advice based on objective criteria about the composition of the National Renewable Energy Priority List.

Draft recommendation 2.4

Consider the energy transition in approval decisions

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) should be amended to require the Minister to consider the needs of the energy transition when deciding whether to approve an energy project that will have a significant impact on a matter of national environmental significance.

Draft recommendation 3.1

Set up a climate risk information database covering all climate hazards

The Australian Government should coordinate with relevant federal, state and territory organisations to support development of a central climate-risk information database to cover all climate hazards in different parts of Australia. The database should enable the public, builders, developers, insurers, government planners and policymakers to get granular and accessible climate risk information.

Draft recommendation 3.2

Develop a nationally consistent climate resilience rating system for housing

The Australian Government should lead development of a nationally consistent climate resilience star rating system for housing.

- The rating system should be outcome-based, with ratings reflecting potential damages from climate hazards. Ratings should account for location-specific climate hazards and the characteristics of a property.
- The rating system should be complemented by supporting material so that households, builders and insurers can easily identify upgrades that would improve a property's resilience.
- Development of the rating system and supporting material should build on work undertaken in this area and learn lessons from the development of the world-leading Nationwide House Energy Rating Scheme (NatHERS).

Draft recommendation 3.3

Governments should agree on a series of actions to improve housing resilience over time

The Australian Government should lead work with the states, territories and local governments to agree on a series of actions that will improve the resilience of our housing stock over the coming decades. Older housing in high-risk areas will need the greatest focus.

- This work should be anchored around time-specific and outcome-based goals for household-level resilience, taking into account climate damages and the effects of heat. The goals will form the basis for a shared understanding of how agreed actions will improve resilience.
- Actions should only be taken where benefits exceed costs based on high quality impact assessments. They should be staged in line with the expected pace of climate change and coordinated with public investment to achieve measurable improvements in precinct resilience.

Draft recommendation 3.4

Give the Climate Change Authority responsibility for monitoring, evaluation and learning regarding adaptation policy

The Australian Government should legislate for the Climate Change Authority to take responsibility for monitoring, evaluating and learning to inform governments and the public about progress in adapting to climate change, and whether policies are effective. Progress reports should be published every two years and include recommendations about how to improve adaptation policy.

About this inquiry

To mitigate the effects of climate change, Australia has committed to achieving net zero emissions of greenhouse gases by 2050 and to medium-term emissions reduction targets to take us to that goal.

Clean energy will underpin a decarbonised economy. Australia has a target for 82% of electricity to come from renewable sources by 2030. Some states and territories have similar targets, and many policies are in place to support progress.

Achieving these targets will require significant investment in clean energy infrastructure. Expected retirements of coal plants adds to the urgency of this task. Australia will need to install thousands of wind turbines, millions of panels for solar farms, new transmission lines and substantial storage capacity.

Resilience to climate hazards is an emerging policy focus. Governments have taken early steps to help Australians adapt to the effects of climate change. Yet the policy problem is growing over time, and it will require substantial consideration and action over the decades ahead from governments and society.

Given the challenges ahead, it is imperative that governments choose the most efficient and cost-effective policies to support both the net zero transformation and adaptation. If we can use fewer resources to achieve the outcomes we need, productivity, living standards and community wellbeing stand to grow by more than they otherwise would.

Our areas of focus

Through our Productivity Pitch and consultation, inquiry participants identified many topics this inquiry could look at. We could not tackle them all. After considering factors such as the ease of implementing reform, the potential payoffs and whether work on the topic was underway elsewhere in government, we opted to provide advice on three reform areas.

Reduce the cost of meeting emissions reduction targets

Australian, state and territory governments have a wide range of policies to help meet their emissions targets. We focus on emissions-reduction incentives in the electricity, industrial and transport sectors. These three sectors produce 78% of Australia's gross emissions and are all areas in which technologies to reduce emissions, including electrification options, are rapidly changing.

The PC (2023) recently estimated that some emissions-reduction policies in Australia cost less than $100 per tonne of carbon dioxide emitted, while others may cost as much as $20,000 per tonne.

Enduring, broad-based market mechanisms are the best way to reduce carbon emissions. Governments have made progress on adjusting policy settings towards this goal (through reform of the Safeguard Mechanism, for example), but providing more consistent and comprehensive incentives to reduce emissions would help us reach net zero at a lower cost.

Speed up approvals for new energy infrastructure

Building new energy infrastructure is critical to the energy transition, to the broader economy and to delivering reliable, affordable energy for consumers. It is essential both to meet climate targets and to ensure reliable supply.

Energy projects must comply with important environmental, cultural heritage and other regulatory requirements. But slow, uncertain and complex approvals processes can cause significant and costly delay in getting infrastructure built.

Efforts are being made across multiple levels of government to speed up the approvals process, but more needs to be done, especially nationally. Reforms to national environment laws are overdue and can both expedite approvals and better protect the environment.

Faster decisions for new energy infrastructure would help secure our climate targets and provide reliable and cheaper energy.

Encourage adaptation by addressing barriers to private investment

The adaptation task is a significant, long-term policy challenge. Action will be needed across the environment, society and economy, and from all of us: households, businesses and governments. Rather than consider the entire arc of action required, which is beyond the resources of this inquiry, we focus on the challenges to adapting housing.

Where people live and the way their homes are built will directly impact how Australians are affected by climate change. There are opportunities to adapt. But households might find it difficult to make well-informed decisions about investing in climate resilience. People often lack trusted and easily accessible information on the risks they face and on worthwhile investments in resilience. The changing nature, long time horizons and innate uncertainty of physical climate risks complicate decision-making. And individuals do not experience all the benefits and costs of their action or inaction on making their housing more resilient.

Resilient homes would be able to better withstand natural disasters and shield Australians from the effects of higher temperatures, contributing to fewer reconstruction costs, a healthier, more productive population and a better quality of life. They should be a major policy goal.

Our approach

In this busy policy space, we have scoped this inquiry to avoid duplicating other work, including:

- for cost of meeting targets: the National Electricity Market wholesale market settings review; the Net Zero Plan and the electricity and energy, transport, industry and resources sector plans; and the upcoming reviews of the Safeguard Mechanism and the New Vehicle Efficiency Standard
- for planning and approval processes: the Samuel Review (2020), the Community Engagement Review (2023) and the First Nations Clean Energy Strategy (2024)
- for adaptation: the forthcoming National Climate Risk Assessment and National Adaptation Plan. [Unlikely these will be released before our report, but staying in touch with DCCEEW to monitor the situation.]

1. Reduce the cost of meeting emissions targets

Summary

- **Reducing emissions from greenhouse gases is an important national priority, but it comes with costs. Minimising the cost of meeting Australia's emissions targets will free resources for more productive activities.**
- **Governments should make a concerted and urgent effort to create more consistent and comprehensive incentives to reduce emissions. They should build on existing policies where possible, by:**
  - ensuring that policies do not preference some options for reducing emissions over others
  - filling in gaps where no incentives to reduce emissions exist
  - eliminating policy overlaps.
- **Governments should prioritise introducing enduring, broad-based market settings in the electricity sector beyond 2030. This would drive ongoing decarbonisation in the sector and support it across the economy as other sectors electrify. The market settings should:**
  - create nationally consistent incentives, irrespective of generation technology or jurisdiction
  - imbed investment incentives to ensure reliability and system security are maintained.

  Governments should phase out any jurisdictional- and technology-specific policies over time.
- **The Safeguard Mechanism, which provides an effective incentive to reduce 80% of Australia's heavy industry emissions, can be improved by moving to coverage of more industrial facilities.**
- **Incentives for heavy vehicle operators to reduce emissions are inadequate. The Australian Government should introduce a new, technology-neutral policy to reduce emissions from heavy vehicles.**
- **With the introduction of the New Vehicle Efficiency Standard, Australian and state and territory governments should phase-out EV-specific tax exemptions to eliminate policy overlaps.**
- **To support the achievement of Australia's emissions targets at the lowest possible cost, the Australian Government should task an independent agency with developing national target-consistent carbon values. The Australian, state and territory governments should:**
  - consistently include estimates of emissions-reduction policies' cost-effectiveness in impact analyses
  - routinely assess those estimates against the national carbon values
  - design and adjust policies to be consistent with the national carbon values.

1.1 Introduction

Reducing emissions from greenhouse gases is an important national priority. It will bring benefits in the form of less damage from climate change and help realise Australia's international climate commitments – most importantly the goal of net zero emissions by 2050.

But reducing emissions comes with costs. In many cases it is more expensive to use a clean product or production method than an emissions-intensive one – an extra cost known as the 'green premium'.

The aim of the Australian, state and territory governments should be to achieve net zero at the lowest possible cost to households, businesses and taxpayers. Success will free resources for more productive activities, enabling higher productivity growth, living standards and community wellbeing than would be possible otherwise.

Consistent and comprehensive incentives to reduce emissions are central to this task. They encourage emitters to seek out the lowest-cost emissions-reduction options and to develop new clean technologies. This will only become more important as electrification technologies continue to develop, and businesses and consumers are increasingly able to substitute electricity for directly burning fossil fuels.

In this inquiry, the PC is seeking to build on existing policies aimed at reducing emissions. Our recommendations align with many of the benefits conferred by a broad-based, enduring national carbon price – a policy that many, including the PC (2008, 2011, 2023b), have consistently argued for.

The PC understands that emissions-reduction incentives are necessary but not sufficient to achieve net zero in Australia. The pace of the transformation needed will require governments to play a range of other roles. These include: supporting research and development; designing and regulating markets; helping businesses build their capacity to measure and reduce emissions; addressing behavioural or market gaps; enabling access to complementary infrastructure; and assisting communities to adjust to change. Carefully targeted and stewarded policies, focused on aspects of the transformation that broad-based incentives cannot address, will ensure a smoother transition to net zero. These other roles of government are important but are not the focus of this inquiry.

This inquiry focuses on improving emissions-reduction incentives in Australia's three highest-emitting sectors: electricity, heavy industry and transport. Together, these accounted for 79% of gross emissions in 2023-24.[1]

Incentives are needed within and across sectors to drive efficient, low-cost emissions reduction, including to provide a long-term impetus for innovation. Yet not all sectors are covered by such incentives, some policies provide inconsistent incentives, and in other cases, multiple incentives overlap. In designing emissions-reduction policies to reduce the cost of meeting net zero, governments should focus on three core principles.

1. **Ensure that policies do not preference some emissions-reduction options or technologies over others.** Emitters should get the same benefit from reducing emissions regardless of how they do it (ATSE, sub. 14, p. 5). If policies favour some lower-carbon options over others, emitters may pursue these because they attract a particularly large reward, not because they are the cheapest way to reduce emissions.

[1] PC calculations based on data from DCCEEW (2025c). In this report, heavy industry emissions refer to emissions from three categories in Australia's National Greenhouse Gas Inventory: fugitive emissions, emissions from industrial processes, and stationary energy emissions minus emissions from the buildings sector.

2. **Fill gaps.** Where no emissions-reduction incentives exist, governments should, if feasible, extend existing policies or create new incentives that achieve similar effects. Gaps raise the cost of meeting emissions targets. Emitters lacking an incentive to reduce emissions will not fully exploit low-cost options. All emitters with lower-cost options to reduce emissions should be incentivised to act, irrespective of their sector, and incentives that are broader-based will make this process as smooth as possible.
3. **Eliminate overlaps.** Governments should ensure that multiple incentives do not apply to the same activity (ACCI, sub. 19, p. 21). Overlapping incentives create the risk that emitters will choose emissions-reduction options because they are strongly incentivised to do so, even if the options are more costly than necessary for consumers or taxpayers.

This chapter outlines how governments can minimise the costs of achieving emissions targets, focusing on electricity, heavy industry and transport. It highlights key priorities in the period ahead to fill major gaps in abatement incentives and to more consciously align sectoral emissions-reduction policies over time.

1.2 Incentivise reducing electricity emissions after 2030

Draft recommendation 1.1
Reducing emissions in the electricity sector after 2030

Governments should prioritise introducing enduring, broad-based market settings in the electricity sector beyond 2030. The settings should:

- create nationally consistent incentives for lowest-cost clean energy, irrespective of generation technology or jurisdiction
- embed investment incentives to ensure reliability and system security are maintained.

Governments should also phase out any jurisdictional- and technology-specific incentives over time.

Achieving net zero in Australia will require deep emissions cuts in the electricity sector, which produced 30% of Australia's gross emissions in 2023-24.[2]

Because electricity can substitute for the direct combustion of fossil fuels, a low-carbon grid – and an expanded one[3] – is essential to reducing emissions elsewhere. For example, many manufacturing businesses can reduce their direct emissions by switching to electric appliances (CCA 2024c, pp. 71–72) (section 1.2), drivers can switch to electric vehicles (EVs) (section 1.3), and households can substitute electric heaters and other appliances for gas ones.

[2] PC calculations based on data from DCCEEW (2025c).
[3] In the 2024 Integrated System Plan, as a result of electrification, electricity consumption increases significantly up to 2050 in the Step Change scenario (AEMO 2024, pp. 24–25).

Key policies will not drive further emissions reduction after 2030

Two major policies incentivise emissions reduction in electricity

Two major policies provide incentives to reduce electricity emissions: the Renewable Energy Target (RET) and the Capacity Investment Scheme (CIS). Both effectively subsidise renewable energy generators and help them out-compete fossil fuels in wholesale electricity markets. Both apply nationwide: in the National Electricity Market (NEM), which covers New South Wales, Victoria, Queensland, South Australia, Tasmania and the ACT; in Western Australia's Wholesale Electricity Market (WEM); and in other, smaller grids.

The RET provides extra revenue to renewable generators. It enables them to create and sell tradeable certificates, and requires purchasers of wholesale electricity to acquire a certain number of certificates every year (CER 2025d). The scheme has been cited as a major driver of investment in renewable energy historically (Wood et al. 2024, pp. 17–18).

The RET has two parts: the Large-scale Renewable Energy Target (LRET), which supports grid-scale wind and solar; and the Small-scale Renewable Energy Scheme (SRES), which supports rooftop solar and other small-scale energy systems.

- Under the LRET, when wind and solar generators produce electricity, they generate certificates – large-scale generation certificates (LGCs) – that they can sell to wholesale electricity purchasers (CER 2025g).
- Under the SRES, people and businesses generate certificates by installing small-scale systems. They too can sell certificates to wholesale purchasers (CER 2025f).

The RET is a relatively efficient subsidy policy. All grid-scale generators receive the same subsidy per megawatt hour of clean electricity they produce, creating a strong incentive to build new renewable energy capacity as cheaply as possible. However, though the scheme affects the profitability of incumbent fossil fuel generators, it does not directly incentivise emission reductions via a switch from coal to gas. And the scheme does not provide a strong incentive to reduce electricity use: it puts some upward pressure on prices, via the requirement that wholesale purchasers buy certificates; but generators also earn revenue through certificate sales, which puts offsetting downward pressure on prices.

The CIS supports renewable energy via revenue underwriting. Under the scheme, proponents of new wind, solar and battery projects agree contracts-for-difference (CfDs) with the Australian Government. If a project earns below an agreed revenue floor, the Government will pay a share of the difference between the floor and its actual revenue; and if it earns above an agreed revenue ceiling, the company will pay the Government a portion of all revenue above the ceiling (DCCEEW 2024e, p. iv). CfDs guarantee minimum revenue flows from new projects, which makes investing less risky. The CIS was created in response to the Australian Government's concern that not enough wind and solar would come online to achieve the national target of 82% renewable energy by 2030 (DCCEEW 2023b, p. 6). If the CIS is to induce additional investment, it will need to provide more revenue to renewable generators than they would have received absent the policy. This means that it will likely deliver a net subsidy to generators unless an unanticipated economic shock boosts their market revenues.

Unlike the RET, the CIS will not necessarily provide equivalent returns for renewable generators. Because a range of criteria are applied in CIS auctions (DCCEEW 2024e, pp. 20–32), projects may receive different

effective per megawatt hour subsidies. In addition, the scheme allocates capacity to each jurisdiction,[4] rather than nationally in the most cost-effective locations. The fiscal costs of the CIS are not clear at this stage.

Neither policy is designed to support new investment after 2030

Neither the RET nor the CIS will provide incentives to continue reducing emissions after 2030. The RET will cease in that year (CER 2024) and no CIS tenders are scheduled after 2027 (DCCEEW 2025a). Generators that sign CfDs before 2027 will still receive payments from the Australian Government after that date if their revenue drops low enough, but on the current timetable, the CIS will provide no incentives to build new projects after 2030.

The Australian Government's Guarantee of Origin scheme could provide wind and solar generators with additional revenue. The scheme will allow generators to create tradeable Renewable Electricity Guarantee of Origin (REGO) certificates representing units of renewable electricity (Parliament of Australia 2024a, p. 9).

Yet, this scheme on its own is unlikely to create a sufficient emissions-reduction incentive. While there will be demand for REGOs, it is unlikely to be enough to drive the clean energy transition without some form of obligation to buy certificates. Under the LRET, significantly more demand is 'mandatory' than 'voluntary',[5] so REGO prices in are unlikely to be high enough to create the same investment signal that the LRET has created. Origin Energy (qr. 48, p. 2) told our inquiry that:

> The end of the Renewable Energy Target framework in 2030 also means the end of established targets and mandatory use of [LGCs] and [STCs] to meet these targets. While the voluntary [REGO] certificate scheme has been introduced to replace LGCs and STCs, the loss of the clear target for the industry and regulatory requirement to participate in these schemes may result in more fragmentation in expectations and efforts across jurisdictions.

In the absence of further national or NEM-wide schemes, state and territory schemes could reduce emissions to some degree. The NSW and ACT governments have underwriting schemes for renewable generators (ACT Government 2021; AEMO Services 2024b); and the Victorian Government has flagged the option of supporting offshore wind projects through CfDs (DEECA 2025, p. 11). However, these policies will only reduce emissions in the jurisdictions in which they apply and will not be enough to cost-effectively decarbonise the sector.

Electricity will not decarbonise without emissions-reduction incentives

Even absent a post-2030 policy, some emissions reduction would likely still occur through market forces. Wind and solar generators now have lower levelised costs than any other fuel source (Graham et al. 2025, p. 66).[6] They would therefore make up a significant share of the fuel mix even without any policy favouring them over fossil fuels.

Yet without further policy effort, the electricity sector might not decarbonise fast or deeply enough to make a sufficiently large contribution to the national emissions targets. Coal generators may operate for longer than is consistent with the targets, due to policy intervention and economic factors. And while gas is needed to 'firm' electricity supply – meaning to ensure supply when renewables cannot generate enough power – gas

[4] For example, CIS Tender 1 included capacity targets for several NEM jurisdictions (DCCEEW 2024e, p. iii).

[5] In 2024, 30.2 million LGCs were surrendered to the Clean Energy Regulator to show compliance with wholesale purchasers' requirement to buy certificates. In the same year, 10.4 million certificates were cancelled for 'voluntary' purposes (CER 2025e, p. 20).

[6] A generator's levelised cost is its total cost per megawatt-hour over its lifetime. The measure includes both upfront capital costs and ongoing maintenance and fuel costs.

use will need to be minimised over time to meet net zero. It will not be possible to induce the 'right' amount of gas firming without incentives in place.

A post-2030 emissions-reduction incentive will be needed to meet Australia's emissions targets with a fuel mix that is as low-cost as possible.

Create incentives to efficiently decarbonise electricity after 2030

Introduce a nationally consistent emissions-reduction policy

Governments should prioritise introducing enduring, broad-based market settings in the electricity sector beyond 2030. This would drive ongoing decarbonisation in the sector and support it across the economy as other sectors electrify. Clear and predictable market incentives will build certainty and investor confidence and should not be based on continued fiscal support over time. They provide the best prospect for encouraging the generation investment that is needed, at least cost.

The market settings should have several features.

- Incentives to invest in clean energy should be nationally consistent. They should not favour any one zero-emissions generation technology or building generators in any particular state or territory.
  - All generators should pay the same cost per tonne of carbon dioxide equivalent (CO_2-e) they emit. Or, if the policy provides clean energy subsidies, all generators and users of small-scale systems should receive the same subsidy rate.
  - Policies that incentivise energy projects to be built in a specific state or territory, even if they could be pursued at a lower cost elsewhere, make it more expensive to achieve a given national emissions target.
- The market settings should simultaneously embed incentives to ensure reliability and system security, so that achieving net zero does not compromise other energy policy objectives.

Effective and targeted incentives will be critical in building community, industry and government confidence in the transition to net zero, while providing least-cost outcomes for consumers.

The ongoing review of NEM market settings represents an opportunity to make significant progress against these objectives. The review panel is considering how the market settings can 'facilitate emissions reduction in line with the National Electricity Objective and Australia's international commitments' (DCCEEW 2024h, p. 4). The panel may propose settings that support reductions in emissions. It is also considering whether changes to the market's settings are needed to support other objectives, such as reliability. We are not seeking to pre-empt the work of the review; our recommendations are principles-based.

If, following the review, the NEM jurisdictions agree to a new NEM-wide policy that creates consistent emissions-reduction incentives, these market settings should be the primary tool for decarbonising the electricity sector after 2030.

The NEM produces most – though not all – electricity emissions. In 2023-24, 82% of the sector's emissions came from the jurisdictions making up that market.[7]

Any outcome from the NEM review will clearly not cover markets in Western Australian and the Northern Territory. Emissions reduction would be more efficient if incentives in the NEM and non-NEM jurisdictions were to broadly align.

[7] PC calculations based on data from DCCEEW (2025c).

If nationally consistent incentives along the above lines are not introduced, the Australian Government should consider building on existing market-based arrangements such as the Safeguard Mechanism and the RET.

Phase out jurisdiction-specific incentives as a broader incentive comes online

If, and when, a NEM-wide or a national policy is introduced, state and territory governments should phase out overlapping schemes unless they involve significant additional benefits. Retaining jurisdiction-specific incentives would mean some technologies or locations receive stronger incentives, risking resources being diverted from lower-cost opportunities. The NSW Government has already moved to phase out an overlapping scheme. It decided not to run a planned tender for a long-term energy service agreement after the Australian Government indicated it would support 7.1 gigawatts of new capacity in New South Wales via the CIS (AEMO Services 2024a).

Some jurisdiction- or technology-specific policies may deliver additional benefits, such as innovation spillovers (PC 2025c, p. 33) and reliability, . For example, subsidies for clean energy technologies can, in theory, make it easier to reduce emissions more cheaply in the future by bringing down the costs of domestic technology deployment.

Governments should only retain or pursue jurisdiction- or technology-specific policies if rigorous analysis demonstrates that the benefits clearly outweigh their costs. Scheduled points of review should be built into policy settings to ensure that 'off ramps' are embedded into these policies if spillovers are likely to be time-limited, or to create a clear pathway for technology to be integrated into broader-based sectoral incentives over time.

1.3 Improve incentives in heavy industry

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

The Australian Government should lower the Safeguard Mechanism threshold so that it covers more industrial facilities. The Safeguard Mechanism review scheduled for 2026-27 should determine the new threshold but favour broadening the scheme as much as possible. The review should also consider whether the lower threshold would introduce inefficiencies such as uneven coverage in some sectors, and whether it would be appropriate to phase in the inclusion of new facilities. If the review identifies no major countervailing considerations, reducing the threshold from 100,000 tonnes to 25,000 tonnes of carbon dioxide equivalent per year would be reasonable.

If the Australian Government introduces a border carbon adjustment, it should phase out trade-exposed baseline-adjusted status for Safeguard Mechanism facilities that would otherwise be exposed to competition from imports from countries without domestic policies to reduce emissions.

Heavy industry – manufacturing, mining, oil and gas extraction, and chemicals processing – contributes substantially to Australia's emissions. In 2023-24, 29% of emissions came from heavy industry.[8] Ensuring that the right policy settings are in place in the sector will be critical to achieving Australia's emissions targets at least cost.

Policy settings are good, but could be better

The Safeguard Mechanism is an efficient policy

The main policy incentivising emissions reduction in heavy industry is the Safeguard Mechanism. The scheme covers large industrial facilities – those emitting more than 100,000 tonnes of CO_2-e each year (DCCEEW 2025g). It applies not just to heavy industry but to parts of transport (section 1.3) and waste as well.

The Safeguard Mechanism is efficient, as it creates relatively consistent incentives to reduce emissions (ACBF, sub. 38, p. 2). Each year, facilities are assigned a baseline – a specific volume of annual emissions. If their direct emissions exceed their baseline, they must acquire either Safeguard Mechanism Credits (SMCs) or Australian Carbon Credit Units (ACCUs), each representing one tonne of CO_2-e. If their emissions fall below their baseline, they can create SMCs and sell these to facilities that need them (DCCEEW 2025g).

Incentives to reduce emissions will get stronger over time. Baselines are scheduled to fall progressively: between now and 2030, the standard rate that will determine baseline declines is 4.9% per year.[9] All else equal, this will cause credit prices to increase over time by making credits scarcer. The more above-baseline facilities there are, the more demand there is for SMCs and ACCUs; and the fewer below-baseline facilities there are, the smaller the SMC supply. As credits rise in cost, facilities will have a greater incentive to reduce emissions on-site.

Maintaining access to high-integrity ACCUs will be critical

The ability of facilities to comply with their obligations by buying ACCUs is a strength of the Safeguard Mechanism. It enables businesses to reduce emissions elsewhere in the economy if this is less costly than doing so on site.

In response to concerns about the integrity of ACCUs, the Australian Government commissioned an independent review of the ACCU Scheme (Chubb et al. 2022) and accepted all of the review's recommendations in principle (Australian Government 2023). ACCUs have also recently been examined by the Climate Change Authority (CCA) (2023) and Australian National Audit Office (2024). The Australian Government is in the process of implementing the recommendations made by the independent review and the CCA (DCCEEW 2025b). It is important that, going forward, ACCUs represent genuine reductions in atmospheric carbon (ACTU, sub. 32, p. 13). A well-functioning ACCU Scheme will ensure that investment continues to go into developing new ACCU projects, which will reduce emissions across the economy – especially in the land sector.

[8] PC calculations based on data from DCCEEW (2025c). Heavy industry emissions were calculated by summing fugitive emissions, emissions from industrial processes, and stationary emissions minus emissions from buildings. Building emissions were subtracted by assuming that the share of stationary emissions accounted for by buildings in 2023-24 is the same as that projected in 2025 (DCCEEW 2024d, p. 57).

[9] Baselines are 'production-adjusted', meaning that they vary according to production levels. Each Safeguard facility's baseline is determined by taking its production level and multiplying this by an emissions intensity factor and an 'emissions reduction contribution' – the latter declining according to the baseline decline rate (DCCEEW 2025g).

Looking ahead, the use of ACCUs by Safeguard Mechanism facilities should remain unrestricted so that the scheme continues to encourage low-cost emissions reduction across the economy.

There is room to improve the Safeguard Mechanism

It does not cover some industrial emissions

While the Safeguard Mechanism is efficient and has relatively wide coverage, it still misses about a fifth of heavy industry emissions (table 1.1). Those missed are from facilities emitting fewer than 100,000 tonnes of CO_2-e per year.

Table 1.1 – Safeguard Mechanism coverage of heavy industry emissions, 2023-24[a]

	Covered by the Safeguard Mechanism	Not covered by the Safeguard Mechanism
CO_2-e emissions	127 Mt	21 Mt
Share of heavy industry	86%	14%

a. Heavy industry emissions are fugitive emissions, emissions from industrial processes, and stationary emissions minus emissions from buildings. Safeguard-covered heavy industry emissions are all 'covered emissions' in the 2023-24 Safeguard Mechanism facility data, minus all emissions from transport and waste facilities.

Source: PC analysis of data from DCCEEW (2025c) and the CER (2025b).

Gaps of this kind raise the cost of achieving emissions targets and can drag on productivity growth. Facilities outside the scheme have limited or no incentive to reduce emissions, meaning they forego potential low-cost opportunities to reduce emissions; facilities covered by the scheme face a disproportionate burden.

Carbon leakage provisions could make long-term emissions reduction harder

Carbon leakage occurs when the costs of complying with domestic policies create a shift in emissions-intensive production to other countries, either through domestic producers relocating to jurisdictions with less stringent climate policies, or through domestic producers being outcompeted by imports from those jurisdictions.

The Australian Government reduces the risk of carbon leakage from Safeguard Mechanism facilities by giving some facilities 'trade-exposed baseline-adjusted' (TEBA) status. These facilities' baselines decline more slowly than the standard 4.9% per year (DCCEEW 2025g), reducing their compliance costs.

Over the long term, TEBA provisions will limit heavy industry's ability to contribute to Australia's emissions targets. To achieve net zero by 2050, incentives to reduce emissions will need to get stronger over time, because the national emissions budget will get smaller. However, the TEBA system makes it harder to lower baselines and thus to strengthen incentives. This will probably not be a problem in the short term, but in the long term the TEBA system may limit the contribution of facilities covered by the provisions to the national emissions targets.

Some policies potentially overlap

Several state and Australian government subsidies potentially overlap with the Safeguard Mechanism.

- The NSW Government supports manufacturing and mining firms to reduce emissions through 'high emitting industries grants' (NSW Government 2025b).
- The Queensland Government supports resources firms to reduce emissions through the Low Emissions Investment Partnerships (LEIP) grant program (Queensland Treasury 2025).

- The Australian Government's recently introduced Hydrogen Production Tax Incentive (HPTI) provides production subsidies for renewable hydrogen fuel (ATO 2025b).

It is not clear to what extent these programs overlap the Safeguard Mechanism. Some may complement it because facilities they support may be below the Safeguard Mechanism coverage threshold or because they create technology and adjustment benefits. In the case of the LEIP, however, the program's 'initial focus' is on reducing emissions from mines that *are* Safeguard Mechanism facilities (Queensland Treasury 2025).

The HPTI could be viewed as a near-term emissions-reduction policy. However, the Australian Government has emphasised the potential for the scheme to deliver learning-by-doing benefits (Treasury nd, pp. 17–19), so it could also be justified on innovation grounds.

Improve incentives to reduce emissions in heavy industry

Lower the Safeguard Mechanism coverage threshold

The Australian Government should address the lack of coverage of smaller industrial facilities by lowering the Safeguard Mechanism coverage threshold.

A new threshold of 25,000 tonnes of CO_2-e per year – which would appear a reasonable level, as discussed below – would meaningfully broaden the Safeguard Mechanism. In 2023-24, 267 industrial facilities emitted between 25,000 and 100,000 tonnes per year; collectively, they produced about 13 Mt of CO_2-e emissions (table 1.2). Some of these came from transport and waste, but a significant majority were from heavy industry. (The sectoral breakdown cannot be published because the number of transport and waste facilities in the 25,000-100,000 tonne range is small.)

Table 1.2 – Industrial facilities emitting less than 100,000 tonnes of CO_2-e per year, 2023-24[a]

	25,001–100,000 tonnes	50,001–100,000 tonnes	75,001–100,000 tonnes
Number of facilities in range	267	103	40
Emissions in range (Mt of CO_2-e)	13.0	7.3	3.5
Emissions in range as a share of national gross emissions	2.6%	1.4%	0.7%

a. The table includes facilities covered by the National Greenhouse and Energy Reporting scheme, except for grid-connected electricity facilities, facilities that produce legacy landfill emissions, and facility aggregates.

Source: Unpublished CER data and PC calculations based on data from DCCEEW (2025c).

Lowering the threshold would not just bring in new facilities – it would also ensure that currently covered facilities retain an emissions-reduction incentive once they drop below 100,000 tonnes per year. When facilities start emitting at below-threshold levels, their incentives are diluted: they can continue to create SMCs for up to 10 years (DCCEEW 2025g), but are no longer liable for buying credits. The need to preserve the emissions-reduction incentives of current facilities was noted by the Carbon Market Institute (qr. 53, p. 2):

> [A lower coverage threshold] would … importantly prevent currently covered, large industrial emitters from dropping out of the Safeguard Mechanism in cases where emissions are reduced below 100,000 [tonnes of CO_2-e], ensuring that the reformed Safeguard Mechanism delivers on its intent to guide Australian industry's decarbonisation to net zero emissions (as opposed to just guiding facilities' transition to emissions below 100,000 [tonnes of CO_2-e]).

By creating a broader base, a lower threshold would help keep down the cost of achieving Australia's emissions targets. By 2030 – the earliest that the Government should lower the threshold (as explained below) – covered facilities will have already been encouraged to pursue their lower-cost on-site emissions-reduction options. Take a facility that emits 200,000 tonnes of CO_2-e per year and has a 2024-25 baseline of the same amount. If its emissions decline at a rate of 4.9% per year, in 2029-30 it will only be allowed to emit 155,572 tonnes of CO_2-e per year – a reduction of 22% over five years.[10] This facility will be much further along its marginal abatement cost curve than those outside the scheme.

Some inquiry participants expressed support for lowering the Safeguard Mechanism threshold or considering this option as part of the review of the scheme scheduled for 2026-27 (ACBF, sub. 38, p. 7; Australian Council of Superannuation Investors, qr. 20, p. 2; Carbon Market Institute qr. 53, pp. 2–3; Centre for Policy Development, qr. 34, p. 3).

Lowering the coverage threshold would create administrative costs for newly included facilities. But if the level were set at 25,000 tonnes per year or more, these costs would be similar to the administrative costs already faced by these facilities.

- One of the main potential costs is measuring emissions. However, facilities emitting more than 25,000 tonnes of CO_2-e yearly are already required to measure their emissions under the National Greenhouse and Energy Reporting Scheme (CER 2025c).
- New facilities would need to start trading SMCs and ACCUs within the existing system, and reporting on their production levels.

A lower threshold could also create administrative costs for the Australian Government. New production variables would potentially need to be defined, because a new threshold could bring in facilities in industries not currently covered (DCCEEW 2023c, p. 10). But these would be one-off costs.

There is a strong case for lowering the Safeguard Mechanism coverage threshold. The detail of changes should be determined by the 2026-27 review, but the review should favour broadening the scheme as much as possible to unlock the benefit of cheaper emissions reduction. If the review identifies no major countervailing considerations, a reasonable new threshold would be 25,000 tonnes of CO_2-e per year. It would expand the Safeguard Mechanism significantly without creating high administrative costs.

Some of the issues that the review should consider are noted below.

- The review should determine the timing of changes, but ideally the new threshold would come into effect as soon as is practical after 2030. Lowering the threshold before then could create uncertainty. The baseline decline schedule from now until 2030 informs businesses' expectations about the supply of and demand for SMCs and ACCUs in the coming years. Bringing in new facilities before 2030 could unexpectedly alter the price of credits and affect investment decisions.
- The review should consider whether the lower threshold would introduce inefficiencies such as uneven coverage in certain industries. Of course, a new threshold could also remove inefficiencies, because some industries are covered unevenly under the current threshold. For example, the Safeguard Mechanism currently only partly covers the lime industry (DCCEEW 2024f, p. 32).
- It should also consider whether it would be appropriate to phase in the inclusion of new facilities, and if so how this would work. The Carbon Market Institute (qr. 53, p. 3) suggested that, as an interim measure, smaller emitters could opt-in to the scheme. The facilities most likely to respond to this option are ones that would generate SMCs, so the change would likely increase the supply of SMCs in the wider market.

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The Australian Government should flag any changes to the coverage threshold well in advance. This would help provide certainty and facilitate lower-cost emissions reduction, as it would enable businesses to understand the impacts of the change on investments they might be considering as part of plant investment cycles. The Government should clearly state its intentions regarding the Safeguard Mechanism threshold as soon as possible after the 2026-27 review is finished.

If a border carbon adjustment is implemented, phase out TEBA provisions where appropriate

The Carbon Leakage Review gives the Australian Government a chance to address the issues created by the TEBA system, at least in part. In its most recent consultation paper, the review noted that the risk of carbon leakage from imports could be addressed by a border carbon adjustment applied to imports (DCCEEW 2024f, p. 9). This would be in the form of a carbon tariff applied to emissions-intensive imports from countries without equivalent domestic emissions-reduction policies that compete with output from Safeguard Mechanism facilities.

An adjustment at the border calibrated to match the costs created by the Safeguard Mechanism would reduce the risk of carbon leakage for import-competing facilities. Overseas facilities in places without equivalent policies would only be able to succeed against domestic competitors if by using cleaner technology. Similarly, domestic firms would have less incentive to send production offshore because they would pay a carbon price at the border.

If a border carbon adjustment is implemented, the Australian Government should remove TEBA provisions for facilities that produce commodities covered by the policy (PC 2024a, p. 4).

TEBA provisions could be phased out in line with the introduction of any border carbon adjustment, to help relevant facilities make an orderly transition.

Address any policy overlap

Over time, policies that are warranted primarily because they support technology development should be merged into broad-based emissions-reduction incentives such as the Safeguard Mechanism or be discontinued. Regular reviews will help to determine whether these technologies are on a pathway to cost-effective emissions reduction and therefore will obtain the necessary commercial impetus from broad-based emissions-reduction incentives or whether these technologies have not delivered on their ambition and are tying up resources that could be redeployed to more valuable uses.

1.4 Fill gaps and eliminate overlaps in transport



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

The Australian Government should introduce a new emissions-reduction incentive to cover heavy vehicles. The incentive should be as technology-neutral as possible, meaning that it should create the same incentive to reduce emissions by switching from fossil fuels to electric vehicles, low-carbon liquid fuels or any other method to reduce emissions.

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

Now that the Australian Government has implemented the New Vehicle Efficiency Standard, it should phase-out the exemption of electric vehicles from the Fringe Benefits Tax, and state and territory governments should phase-out the exemption of electric vehicles from vehicle stamp duty.

Transport is the third-highest emitting sector in Australia, responsible for 19% of gross emissions in 2023-24.[11] Transport emissions come from a range of vehicle types, with passenger cars the largest source (table 1.3).

Table 1.3 – Almost half of transport emissions come from passenger cars[a,b,c]
Transport emissions by vehicle type in 2023-24

	Passenger cars	Heavy vehicles		LCVs	Planes	Trains	Other
		Trucks	Buses				
Share of sector emissions (%)	42	23	2	18	9	4	4

a. 'LCVs' refers to light commercial vehicles. **b.** 'Trucks' refers to 'Other' includes maritime vehicles, buses and motorcycles.

Source: PC analysis using data from BITRE (2024).

The Australian and state and territory governments have used a range of policies to incentivise emissions-reduction incentives in transport – some of which overlap, and some of which miss large parts of the sector. Figure 1.1 summarises the main emissions-reduction policies that apply in the transport sector.

There are overlaps and gaps in the transport sector

Multiple overlapping incentives apply to light vehicle users

Because emissions in the light vehicle sector come from small emitters – specifically, owners of passenger cars and light commercial vehicles (LCVs) – governments may need to take a different approach to reducing emissions in the sector than they do elsewhere.

In electricity, heavy industry and parts of transport such as aviation, emitters are typically large, sophisticated businesses, able to analyse the costs and benefits of an investment over its lifetime. As a result, when governments make it costlier to use emissions-intensive fuels relative to clean alternatives, these businesses take emissions into account in both short-term operational decisions and long-term investment decisions.

This is not necessarily the case when it comes to passenger cars. Many people likely find it challenging to compare different cars' long-term costs and benefits when making purchase decisions. Some research indicates that buyers significantly under-estimate future fuel cost savings (Gillingham et al. 2021; Leard et al. 2023, p. 170), with possible explanations being that they do not pay attention to fuel economy ratings, or find it hard to estimate future savings given the uncertainty (Gillingham et al. 2021, p. 210). Not all research is consistent with the above: some studies show little or no undervaluation (Busse et al. 2013; Grigolon et

[11] PC calculations based on data from DCCEEW (2025c).

al. 2018). But given the challenges involved in calculating future benefits, it seems likely that passenger car buyers do not fully account for lifetime fuel costs in their purchase decisions.

Figure 1.1 – Emissions-reduction incentives in the transport sector and their issues

Vehicle type	Policies/incentives to reduce emissions	Issues
 **Passenger vehicles**	• New Vehicle Efficiency Standard (NVES) • Electric vehicle subsidies • Fuel excise incidentally creates an incentive to abate	• NVES and EV subsidies are duplicative – both promote the purchase of low-emissions vehicles
 **Light commercial vehicles**	• NVES • Fuel excise (except for off road drivers of LCVs)	• NVES and EV subsidies are duplicative – both promote the purchase of low-emissions vehicles
 **Trucks**	• Road User Charge (RUC), incidentally creates an incentive to abate	• Sector not covered by Safeguard Mechanism • RUC would fail in its intended purpose if it reduced emissions • RUC does not encourage LCLFs
 **Planes**	• Safeguard Mechanism	• Safeguard Mechanism does not cover the whole sector (with the current coverage threshold in place)
 **Trains**	• Safeguard Mechanism	• Safeguard Mechanism does not cover the whole sector (with the current coverage threshold in place)

This may also be true for vehicles owned by small businesses. Though such businesses have strong commercial incentives to accurately project the long-term costs and benefits of investments, they may not always have the capacity to do so.

To the extent that vehicle buyers under-estimate future fuel cost savings, any policy aimed at changing their behaviour by making the use of fossil fuels more expensive will be less effective that it might be otherwise.

If this is true, there is a case for two separate policy interventions:

- a purchase incentive to encourage buyers to choose more fuel-efficient vehicles
- an operational incentive that raises the costs of driving emissions-intensive vehicles relative to clean ones.

Several, overlapping purchase incentives apply to light vehicles.

Governments encourage the purchase of EVs through various tax discounts.

- The Australian Government supports EVs through the income tax system. Zero-emissions cars are exempt from Fringe Benefits Tax (FBT) (ATO 2024a), making them cheaper to provide as fringe benefits. When the policy was introduced, the Australian Government estimated that an employee receiving an eligible car worth $50,000 through a salary-sacrificing arrangement would save up to $4,700 per year (Chalmers 2022).
- Some EV owners receive stamp duty discounts in the Northern Territory (NT Government 2025), and all EV owners do in the Australian Capital Territory (ACT Government 2022) – though the ACT Government plans to remove its discount later in 2025 (ACT Revenue Office 2025).

Some state and territory governments also provide registration discounts for EV owners (ACT Government 2022; NT Government 2025; VicRoads 2024). However, these discounts are spread over vehicles' lifetimes, so it is unclear to what extent they influence purchase decisions.

In addition to EV subsidies, the Australian Government promotes the supply of low-emissions light vehicles through the New Vehicle Efficiency Standard (NVES). The NVES will make a wider range of low-emissions vehicles available, providing consumers with more purchase options.

Under the scheme, importers of new passenger cars and light commercial vehicles (LCVs) must ensure their vehicles meet certain emissions intensity standards. In 2025:

- a supplier's fleet of 'Type 1' vehicles (most passenger car) must emit no more than 141 grams of CO_2 per kilometre on average
- a supplier's fleet of 'Type 2' vehicles (heavy passenger cars and all LCVs) must emit no more than 210 grams of CO_2 per kilometre (DITRDA 2025).

Suppliers have flexibility in how they can comply. Those whose fleets are more emissions-intensive than the relevant standard can meet their obligations by buying credits – 'units' – from those whose fleets beat the standard (DITRDA 2025). This mechanism gives suppliers an incentive to improve the availability of low-emissions vehicles.

Over time, the NVES should make low-emissions vehicles cheaper relative to emissions-intensive vehicles, in all likelihood leading to an increase in the share of low-emissions vehicles on the road over time.

The EV purchase subsidies and the NVES overlap because they both promote the purchase of low-emissions vehicles. EV tax discounts subsidise car buyers to opt for EVs, while the NVES is a broader-based policy that aims to increase purchases of low-emissions light vehicles, including both EVs and more fuel-efficient fossil fuel cars.

Fuel excise creates an operational incentive

Fuel excise may also be considered an operational incentive. The excise is a tax per litre of fuel, with different rates for different fuel types. Both petrol and diesel are taxed at 50.6 cents per litre. All light vehicle users that run on fossil fuels pay the tax except for those driving LCVs on non-public roads, who receive refunds in the form of fuel tax credits (ATO 2024b).

Fuel excise makes it more expensive to drive emissions-intensive cars. Because the CO_2 produced per unit of fuel is more or less constant for every fuel type – burning a litre of petrol emits roughly 2.3 kilograms of CO_2, for example (NTC 2024, p. 3) – the more fossil fuel efficient a vehicle, the less the driver pays in fuel excise.

Fuel excise has not traditionally been seen as an emissions-reduction policy. Historically, it was intended as a way to finance public roads; then, as road spending became independent of the revenue raised by fuel excise, as a contribution to the broader budget (PBO 2022, p. 4). Today, however, the OECD (2024, p. 1) describes fuel taxation as 'an implicit form of carbon pricing'.

Emissions-reduction incentives for heavy vehicles are inadequate

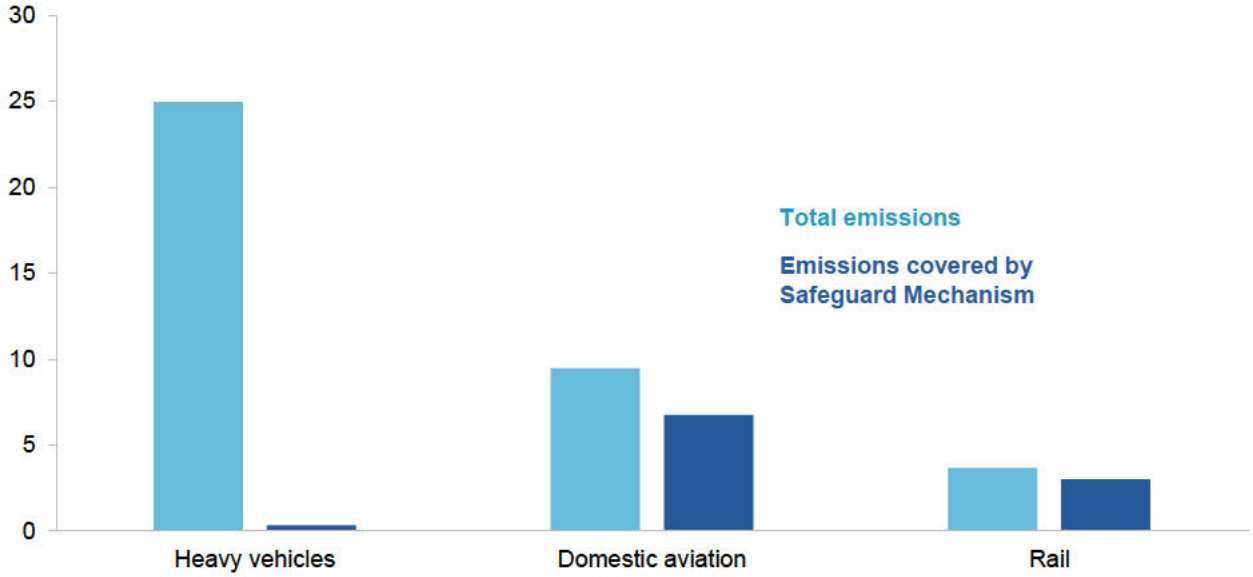
The Safeguard Mechanism misses emissions from heavy vehicles

Heavy transport emissions are emissions from aviation, rail, heavy vehicles (trucks and buses) and other large vehicles.

There are incentives to reduce heavy transport emissions, but they are limited. The main policy that applies in the sector is the Safeguard Mechanism, which captures most aviation and rail emissions but misses heavy vehicles almost entirely. In 2023-24, the Safeguard Mechanism covered 71% of emissions from domestic aviation and 82% from rail, but only a small share of emissions from heavy vehicles (figure 1.2).

Figure 1.2 – The Safeguard Mechanism covers most emissions from rail and aviation but misses heavy vehicles[a,b]

Total emissions and emissions covered by the Safeguard Mechanism, 2023-24, megatonnes of CO_2-e



a. The data on total emissions in each category is from the 2024 Australian Infrastructure and Transport Statistics Yearbook. Heavy vehicle emissions are emissions from articulated trucks, rigid trucks and buses. The data on emissions covered by the Safeguard Mechanism is from the Clean Energy Regulator's 2023-24 baselines and emissions data. 'Heavy vehicles' includes the ANZSIC category Road Freight Transport (461); 'Domestic aviation' includes the category Air and Space Transport (490); 'Rail' includes the categories Rail Freight Transport (471) and Rail Passenger Transport (472). There are no facilities in the category Road Passenger Transport (462) **b.** Emissions from heavy vehicles are only those from road transport activities. Emissions from trucks used in other settings, such as mine sites, are not counted; these emissions are classed as stationary emissions and are part of heavy industry.

Source: PC analysis of data from BITRE (2024) and the Clean Energy Regulator (2025a).

If the Australian Government were to lower the Safeguard Mechanism threshold to 25,000 tonnes of CO_2-e per year (recommendation 1.2), the scheme's coverage of most heavy vehicle businesses would likely still be limited, as their emissions would not breach the threshold. The heavy vehicle industry is dominated by smaller businesses: in June 2022 there were about 59,000 heavy vehicles businesses in Australia, of which nearly 58,000 had fewer than 20 employees (Australian Trucking Association 2023, p. 12).

Several inquiry participants identified heavy vehicles as an area in which there is a gap in emissions-reduction incentives and support for decarbonisation (Electric Vehicle Council, qr. 32, p. 4; Engineers Australia, qr. 73, p. 2; Heavy Vehicle Industry Australia, qr. 36, p. 1). The Australian Industry Group (qr. 52, p. 3) wrote:

> There is a significant gap in support for decarbonisation of freight and logistics below Safeguard scale. It will be important to address this gap as this is otherwise set to be a major remaining component of residual emissions.

It was argued that the gap for heavy vehicles creates the possibility of 'perverse incentives for Safeguard-covered rail freight emissions to "leak" out of the Safeguard-captured rail freight and into more emissions-intensive road freight that is not currently covered by a carbon price or policy' (Carbon Market Institute, qr. 53, p. 2).

Participants also noted the barriers that some heavy vehicle operators face to switching to low- or zero-emission heavy vehicles. These include a lack of charging and refuelling infrastructure, the fact that heavy vehicles are long-lived assets that are purchased infrequently, variable weight limits on roads and high costs in a competitive industry with low-margin businesses (Australia Logistics Council, qr. 69, p. 2; Australian Trucking Association, qr. 71, p. 1; Electric Vehicle Council, qr. 32, p. 2; Heavy Vehicle Industry Australia, qr. 36, p. 1). Small businesses using heavy vehicles may also face challenges accurately accounting for long-term fuel costs when making purchase decisions.

The current Road User Charge provides an incidental, limited incentive

Heavy vehicles that use public roads also pay fuel excise, though a partial rate of 32.4 cents per litre (ATO 2025a). This is called the road user charge (RUC), and along with registration fees, it is intended as a way for heavy vehicle users to pay for the construction and maintenance costs created by their road use.

Because the RUC is administered through the excise system, it provides some incentive to reduce emissions. Heavy vehicle owners can avoid the RUC or pay less of it by switching to less emissions-intensive vehicles.

However, the RUC is not a suitable long-term emissions-reduction incentive for heavy vehicles. The main reason for this is that the RUC seeks to recover funds for road use and damage. Using the RUC to drive down vehicle emissions would limit the Government's ability to recover funds for road use and damage. Specifically, if businesses switched to more fuel-efficient trucks, emissions would be lower, but a large share of heavy vehicle owners would no longer be paying for their road use. Governments should require heavy vehicle users to pay both the costs of their emissions *and* the road damage they cause.

In addition, the rules relating to RUC create no incentive for operators to pursue one potential option to reduce emissions: renewable diesel. Renewable diesel is a low-carbon liquid fuel which creates fewer lifecycle emissions than regular diesel. In the short-term, renewable diesel is unlikely to be a viable clean alternative at scale – as discussed later in this section. But it shows promise as a way to decarbonise parts of transport in the long-term. However, the fuel excise system creates no incentive for fuel users to opt for renewable diesel over regular diesel, because the two fuels are taxed at the same rate. It is currently difficult

to differentiate between renewable and regular diesel for the purpose of administering the excise, as they are chemically equivalent.

Improve emissions-reduction incentives in transport

Introduce a new emissions-reduction policy for heavy vehicles

The Australian Government should introduce a new emissions-reduction incentive to cover heavy vehicles. The policy should be technology-neutral, meaning that, as much as possible, it does not favour any low-emissions technology over any other.

It will probably not be viable in the short term for the industry to switch to clean fuels and vehicles at scale, even with a strong price incentive. Technologies like electric trucks, hydrogen trucks and renewable diesel are relatively expensive and are not ready for widespread use. The Australian Government expects that a broader uptake of these technologies will only be possible from the 2030s; and in the case of electric and hydrogen trucks, a 'mass market uptake' will only be viable in the 2040s (DITRDA 2024, p. 7).

Regardless, an incentive to reduce heavy vehicle emissions is needed. A new policy – phased in over several years – would send a signal to the industry to start considering how their operations might be decarbonised in the long term, and to prepare for possible future investments in clean technologies.

Different low-emissions options will play different roles in reducing heavy vehicle emissions.

- Electric vehicles will likely be suitable for businesses carrying lighter loads over shorter distances.
- Hydrogen vehicles may be an option for heavier loads over longer distances.
- Renewable diesel could be used to decarbonise the longest and heaviest freight, as well as reduce emissions in the short term since it can be used in conventional heavy vehicles (CCA 2024c, pp. 48, 50).

Some emissions reduction could also be achieved by substituting rail or sea for road freight.

This is why a technology-neutral incentive is important. Such a policy would give owners an incentive to make the investments most appropriate to their own operations. Some may be able to reduce emissions at an acceptable cost by switching to EVs. Others may not have this option, perhaps because EVs cannot carry their cargo over the necessary range; in their case, hydrogen or renewable diesel may be less costly per tonne abated.

The Australian Government should also take steps to minimise any disruption that a new policy may create for the industry. It should flag the policy well in advance to maintain certainty for investment decisions and to prevent businesses from investing in emissions-intensive heavy vehicles only for them to later become 'stranded assets'. It should also phase in the new policy to avoid the possibility that heavy vehicle owners face significant new costs all at once.

The Australian Government could also take steps to support heavy vehicle owners to transition to cleaner fuels and vehicles. For example, it could:

- provide information on the options available to reduce emissions
- subsidise research and development relating to clean technologies and how they can be applied in Australia
- ensure that regulatory settings facilitate the rollout of low-carbon liquid fuels, clean technologies and supporting infrastructure such as charging facilities.

The Australian Government could create an emissions-reduction incentive in several way. Various options are outlined below. The PC is interested in participants' views on the advantages and disadvantages of these or any other options not presented here.

Option 1: Include a carbon component in a future road user charging scheme?

One option would be to include a carbon component in any changes to road user charging in the future.

In our 2023 productivity inquiry, the PC recommended that governments introduce a new and more comprehensive system of road user charging, which would include:

- a basic charge for all road users based on how far they travel
- damage premiums
- congestion charges for road users on crowded roads (PC 2023a).

The PC also recommended that governments set out 'the appropriate transition pathway away from fuel excise' (PC 2023a). The Australian Government is using the National Heavy Vehicle Charging Pilot to test different ways to charge heavy vehicles for their road usage based on the weight of the vehicle and distance travelled.

Because of the High Court decision to rule out state-level distance-based charges, governments will need to consider a national approach to road user charging (*Vanderstock & Anor v State of Victoria* [2023] HCA 30).

In any future road user charging scheme, the Australian Government could include a carbon charge in addition to the components noted above. On top of other charges, road users would pay for every unit of CO_2-e they emit, giving them an incentive to switch to lower-emissions vehicles or fuels. This change would blob:https://teams.microsoft.com/c737ce75-3610-438b-83ec-7061602918abresult in emissions-reduction incentives applying to almost the entire transport sector.

One inquiry participant – the Climateworks Centre (qr. XX, p. Y) – argued for a carbon charge in a reformed road user charging system.

> A transformative step towards a more sustainable transport system would be the introduction of road pricing that internalises key externalities, such as greenhouse gas emissions and congestion … A key part of the design to achieve this might be consideration of emissions-based charging for vehicles.

Option 2: Apply the Safeguard Mechanism to fuel wholesalers?

In our 2023 productivity inquiry, the PC recommended applying the Safeguard Mechanism to fuel wholesalers (PC 2023c).

Under this option, fuel wholesalers with downstream emissions above the Safeguard Mechanism coverage threshold would be considered Safeguard Mechanism facilities and face the same basic requirements as other facilities. They would be given an annual baseline and would need to acquire SMCs or ACCUs where they emit above it.

Fuel wholesalers would not report their direct emissions, which would likely be minimal. Downstream emissions caused by the fuel they sell would be calculated to determine their annual emissions volume – a calculation that would be based on fuels' emissions factors.

Applying the Safeguard Mechanism to fuel wholesalers would give them an incentive to sell a greater volume of low-carbon fuels, such as renewable diesel, which would produce fewer downstream emissions.

Under this option, the Australian Government would need to find a way to avoid double-counting transport emissions. As noted above, the Safeguard Mechanism already covers most emissions from aviation and rail,

and a small amount from heavy vehicles. Bringing fuel wholesalers into the scheme without other changes would result in aviation, rail and a few heavy vehicle emitters having their emissions covered both directly *and* upstream. One way to avoid this could be to simply exclude direct transport emissions from the Safeguard Mechanism.

If this option were implemented, it would be necessary to avoid a 'double penalty' for certain emitters that also pay fuel excise. If the Safeguard Mechanism were to make carbon-intensive fuels more expensive, many emitters would pay both the excise and a Safeguard Mechanism-related cost. This could be appropriate in the case of heavy vehicle users, as the excise they pay is intended to cover the costs of their road use. But in the case of light vehicle users, without a separate move to road user charging, it could be viewed as a double penalty.

Option 3: Increase the rate of fuel excise paid by users of heavy vehicles?

Another option could be to increase the rate of fuel excise paid by heavy vehicles by reducing the fuel tax credit rate. Businesses that use heavy vehicles pay the full excise rate when they buy fuel and have some or all of it refunded through fuel tax credits.

- Businesses that use public roads receive a partial refund and pay the rest as the RUC.
- Businesses that do not use public roads receive a full refund and thus pay no excise (ATO 2025a).

The Australian Government could increase the rate of excise paid by heavy vehicles by reducing these refunds. It could phase in the change over several years, thereby giving businesses time to adopt fuel sources that do not attract a higher road use charge or to switch to more efficient vehicles or other modes of transport.

Removing fuel tax credits for heavy vehicles on public roads would mean that the excise they pay in effect has two components: the RUC and a charge for emissions. The latter being the difference between the full rate of excise and the RUC: 18.4 cents per litre (table 1.4). Avoiding the emissions charge would deliver a benefit of $68 per tonne of CO_2.[12]

Table 1.4 – Fuel excise component if heavy vehicles that use public roads were to pay the full rate[a]

	Rationale	Excise rate
Road User Charge	Charging heavy vehicles for the damage they cause to public roads	32.4 cents per litre
Charge for emissions	Charging heavy vehicles for their emissions	18.4 cents per litre

a. The excise rate in the RUC row is the RUC rate in 2025-26. The charge for emissions was calculated by subtracting the 2025-26 RUC rate from the full fuel excise rate of 50.8 cents per litre.

Source: ATO (2025a).

In addition, the Australian Government could reduce the refunds received by users of heavy vehicles that do *not* use public roads. Their tax credit rate could be phased down until their rate of fuel excise is 18.4 cents per litre. This rate would match the emissions charge that public-road users would pay if their tax credits

[12] This was calculated by taking the diesel emissions factor – 2.7 kilograms of CO_2 per litre of fuel burned – and applying it to the excise rate. This notwithstanding, the fuel excise is best not viewed as a good way of charging for carbon because, as noted above, renewable diesel is taxed at the same rate as regular diesel.

were phased out. This change would give these operators an incentive to switch to less emissions-intensive vehicles.

A potential issue with this option is that it would not provide an incentive for heavy vehicle owners to switch to renewable diesel – as noted above, renewable diesel is subject to the same excise rate as regular diesel.

Option 4: A targeted policy for low-carbon liquid fuels?

The Australian Government could reduce heavy vehicle emissions through a targeted incentive for the use of renewable diesel.

The Government is already considering whether and how to promote low-carbon liquid fuels. Recently, it published a consultation paper that outlined policy options for incentivising the use of two fuels: renewable diesel and sustainable aviation fuel (DITRDA and DCCEEW 2024). Both have the potential to play a role in reducing transport emissions, but are currently more expensive than traditional fuels (DITRDA and DCCEEW 2024, p. 9).

The Government is considering a range of policy instruments. These include:

- **production tax incentives**, which would allow businesses to receive a tax credit for every unit of low-carbon liquid fuel they produce
- **contracts-for-difference**, which would underwrite the revenues of low-carbon liquid fuel producers
- **clean fuel mandates**, which would create demand by requiring that a certain minimum share of fuel suppliers' fuel has a low emissions intensity (DITRDA and DCCEEW 2024, pp. 16–25).

Supply-side measures like production tax incentives and contracts-for-difference would reduce the price of renewable diesel relative to regular diesel and thereby make it more attractive to heavy vehicle businesses. A clean fuel mandate could make the fuel relatively cheaper also, but would spread the cost of doing so broadly across the transport sector.

Such a policy would not be technology neutral and therefore would not directly incentivise other options for reducing emissions, such as switching to electric or hydrogen trucks, or substituting rail or sea freight for road freight.

In theory, there could be a case for targeted support for low-carbon liquid fuels as part of a broader strategy to reduce heavy transport emissions. Early investments in emerging technologies can generate 'learning-by-doing' spillovers, which, if large enough, warrant time-limited subsidies.

Whether there is in fact a case for such a policy and, if so, what form it should take, is beyond the scope of this report.

That said, if the Australian Government does choose to support low-carbon liquid fuels to address learning-by-doing spillovers, it should ensure that there are 'off ramps' for such support. There should be a reasonable prospect that low-carbon liquid fuels can become competitive under more broad-based, technology-neutral incentives.

In addition, the Australian Government should, among other things, regularly conduct independent reviews of policies supporting low-carbon liquid fuels, make public the data and reasoning underlying National Interest Framework assessments, and withdraw support if policies are found by independent reviews not to be achieving net benefits to the community.

Option 5: A targeted policy for low-emissions vehicles?

The Australian Government could reduce heavy vehicle emissions through a targeted policy promoting zero-emissions vehicles.

One approach would be to create intensity standards for heavy vehicles, which could work similarly to the NVES. This instrument emissions has been used in the European Union: starting this year, European heavy vehicle manufacturers must comply with targets for fleet-wide average CO_2-e emissions (European Commission 2025). However, such a policy would not be technology-neutral: it would not provide an incentive to switch to clean fuels.

Others have suggested subsidising the purchase of electric trucks. The Australian Trucking Association (qr. 71, p. 1) proposed that the Australian Government:

> incentivise new truck purchasers and existing truck owners to buy electric, where there is a business case to do so, with a voucher scheme covering half the price gap between comparable electric and conventional truck models.

However, this too would not be technology-neutral, and would also potentially create a significant fiscal cost.

Information request 1.1 – Advantages and disadvantages of options to reduce emissions for heavy vehicles

What are the advantages and disadvantages of these options to reduce emissions from heavy vehicles?

- What would be the costs and benefits of each option?
- Would there be any consequences not mentioned in this section?
- What are the key implementation considerations?

Are there options not covered that the PC should consider? What would be their advantages and disadvantages?

Phase out EV-specific incentives

The Australian Government should eliminate the exemption of EVs from FBT, and state and territory governments should eliminate stamp duty and registration discounts for EV owners. Now that the NVES is in place, these policies are duplicative. Not all inquiry participants support this approach. The Electric Vehicle Council (qr. 32, p. 2) argued that 'demand side incentives remain a critical pillar for driving change'.

The main policy promoting the purchase of low-emissions vehicles should be the NVES. Compared with EV-specific subsidies, the NVES incentivises a broader set of emissions-reduction options. Vehicle suppliers can meet the standard not just by selling EVs, but also by selling cleaner fossil-fuelled cars, which may be more cost-effective in some cases.

Several state and territory governments have already eliminated EV purchase incentives. For example, the Queensland Government (2025b) provided rebates to EV buyers, but wound up the scheme in 2024. The removal of policies like these represents a step towards more consistent emissions-reduction incentives in the transport sector.

Previous work by the PC found that EV subsidies likely have large fiscal costs per tonne of avoided CO_2-e. The PC (2023c, p. 14) estimated that the FBT exemption likely costs Australian taxpayers between about $1,000 and $20,000 per tonne of avoided CO_2-e[13] The PC also estimated that state and territory EV subsidies have relatively high fiscal costs (PC 2023c, p. 14). Removing subsidies at all levels of government,

[13] The Electric Vehicle Council (qr. 32, pp. 3) disagreed with this estimate.

and allowing the NVES to be the main tool for promoting clean vehicles, will free up what governments currently spend on EVs for other purposes – ideally more productive ones.

There may be things that governments can do to support EVs besides subsidies. For example, they can ensure that regulatory settings facilitate the deployment of charging infrastructure.

1.5 Apply frameworks to achieve targets at least cost

Draft recommendation 1.4
Apply frameworks to achieve emissions targets at least cost and improve transparency

The Australian, state and territory governments should improve the transparency of emissions-reduction policies by consistently including estimates of their cost-effectiveness in impact analyses. Those estimates should routinely be assessed against agreed national carbon values.

The Australian Government should:

- task an independent agency with relevant expertise with developing national carbon values. These values – estimates of the implied carbon prices needed to meet Australia's emissions targets – should be used consistently as policy benchmarks across government and in regular reporting on the cost-effectiveness of emissions-reduction policies
- design and evolve policy settings to be broadly aligned with these carbon values.

To support achieving net zero in 2050 at as low a cost as possible, the Australian Government should:

- develop a framework for extending emissions-reduction incentives to new sectors. The costs associated with any new policies to reduce emissions in areas like agriculture and household gas should align with the target-consistent carbon values
- continue work to ensure ACCUs are high integrity and seek to integrate ACCUs into every national emissions-reduction policy in the long term so hard-to-abate emitters face consistent incentives.

If Australia is to achieve net zero at the lowest possible cost, governments will need to rigorously assess policies' cost-effectiveness and make sure they are consistent with an efficient pathway to reduce emissions. This will require:

- an agreed common benchmark for the cost-effectiveness of emissions reduction policies
- assessment of all existing and new policies against this benchmark
- publication of assessment results to support transparency
- calibration of policies over time, where possible, to broadly align with the benchmark
- accountability reporting that draws on this benchmark to assess the efficiency and adequacy of policies to reduce emissions
- the Australian Government to integrate ACCUs into national policies.

Improve alignment of emissions reduction incentives over time

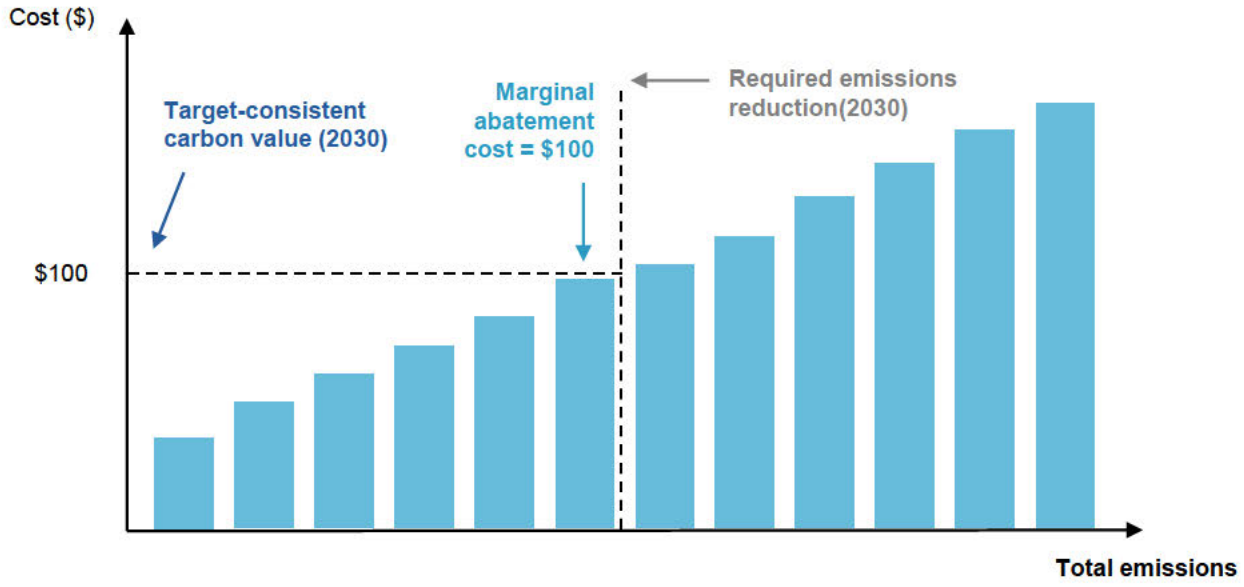
Agree on a benchmark

The Australian Government should task an independent agency with developing a cost-effectiveness benchmark to be used in the design and assessment of emissions-reduction policies. The Australian Energy Market Commission (sub. 30, p. 2) highlighted the need for uniform benchmarks across the economy to support 'making more efficient, least-cost decisions'. National target-consistent carbon values (TCCVs) would serve this purpose. The values should be developed by an agency with relevant expertise, such as the PC or the Climate Change Authority. The agency should be adequately resourced to create and periodically update TCCVs.

TCCVs provide a guide to a country's efficient emissions-reduction pathway. They are estimates of the implied carbon prices needed to meet emissions targets, and are determined using information about *potential* opportunities to reduce emissions in the economy. The values are calculated by modelling the prices per tonne of CO_2-e needed to reach particular targets in particular periods, assuming that the prices are paid by all emitters (Stern et al. 2022, pp. 11–12). Each value therefore equals the cost of the last emissions-reduction measure necessary to achieve a certain reduction in emissions at a certain time. For example, if it costs $100 to abate the final tonne of CO_2-e needed to achieve required emissions reduction in 2030, then the TCCV in 2030 is $100 per tonne (figure 1.3).

Figure 1.3 – A TCCV is the marginal cost of achieving an emissions target at a given point in time

Hypothetical intersection of an emissions target and a marginal abatement cost curve



Source: Adapted from Deloitte Touche Tohmatsu (2024, p. 8).

If the 2030 TCCV is $100 per tonne and a policy creates per-tonne emissions-reduction costs of $50, the policy is consistent with the efficient pathway because the emissions reduction it delivers would occur under an economy-wide carbon price that efficiently allocates abatement. But if a policy creates costs of $500 per tonne, it suggests the national target could be achieved more efficiently by reducing emissions in other ways.

Calculating TCCVs involves uncertainty. Estimating them requires assumptions about the costs of reducing emissions many years into the future, which are inherently hard to predict. Even so, they are much better than no guide. The agency that develops the values can account for the uncertainty around future costs through sensitivity analyses – as explained below, this has been the approach taken by agencies that already use TCCVs in Australia.

The estimates should also be updated every few years as more information comes to hand about likely future emission-reduction costs, and as new interim targets are announced.

Some agencies already use TCCVs.

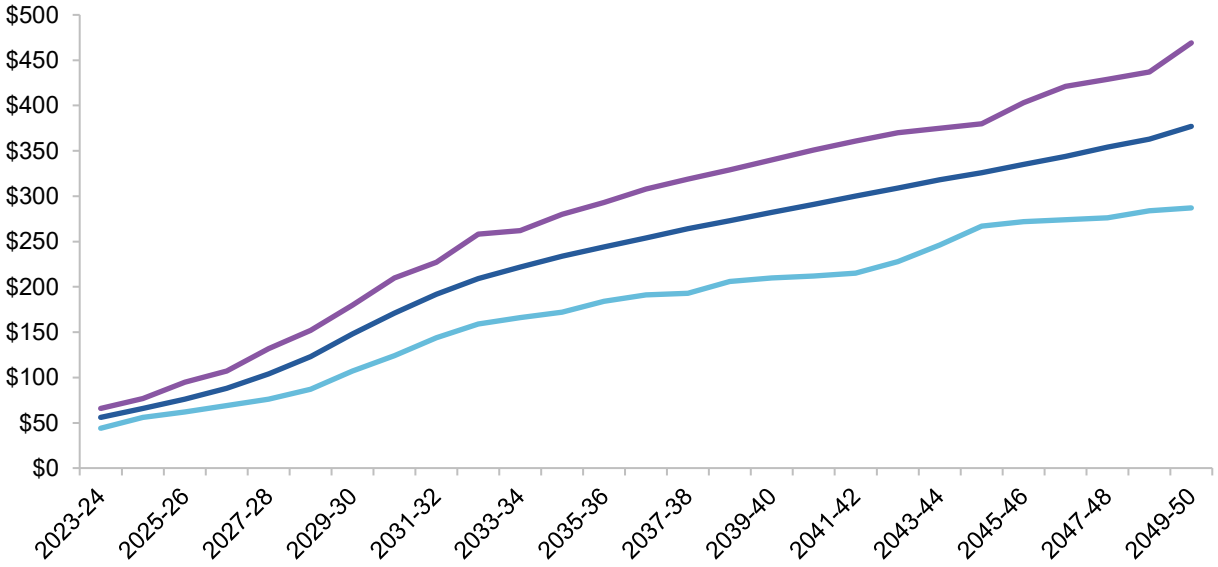
- Infrastructure Australia has developed TCCVs and requires that they be used to estimate the value of avoided emissions in proposals submitted to the agency (Infrastructure Australia 2024, p. 4).
- The NSW Government has also developed TCCVs to be used in cost–benefit analyses (NSW Treasury 2024, p. 4).

These agencies calculated their values by modelling the carbon prices needed to achieve national and NSW state emissions targets respectively (Deloitte Touche Tohmatsu 2024, pp. 7–9; Infrastructure Australia 2024, p. 3).

TCCVs rise over time. Infrastructure Australia's central value in 2023-24 is $56 per tonne of CO_2-e and increases to $377 by 2050 (figure 1.4); NSW Treasury's central value is $130 per tonne in 2024-25 and rises to $350 per tonne by 2050 (NSW Treasury 2024, p. 4). This reflects the rising marginal cost of reducing emissions as emitters exploit cheap options first before moving to more expensive ones to meet more stringent targets.

Figure 1.4 – Target-consistent carbon values rise over time[a]

Infrastructure Australia target-consistent carbon values 2024–2050, cost per tonne of CO_2-e in 2023 dollars



a. The three estimates are based on different sets of assumptions about the future costs of reducing emissions. In the low estimate scenario, future costs are relatively low; in the high estimate scenario, costs are relatively high; and the costs in the central scenario are in between those in the low and high scenarios.

Source: Infrastructure Australia (2024, p. 4).

An alternative to the 'target-consistent' approach would be to base policy decisions on the social cost of carbon (SCC), which refers to the dollar value of the damage caused by climate change. Some analysts favour a SCC-based approach over a target-consistent one. For example, Aldy et al. (2021, pp. 851–852) have argued that targets are arbitrary political decisions and that governments should simply compare policies' costs and benefits – the latter measured using an estimate of the SCC.

Nonetheless, the Australian Government's targets represent commitments made in international climate change negotiations. They are based on a range of factors, including climate science, the necessity of sharing the emissions-reduction burden globally, and the state of international cooperation. TCCVs provide a foundation for, and would support, the achievement of Australia's agreed targets at the lowest possible cost.

Estimate policies' cost-effectiveness and assess them against the benchmark

Estimating cost-effectiveness should be a standard part of the impact analysis process for major new emissions-reduction policies.

Not all analyses of policies' impact have included detailed quantitative estimates of their cost-effectiveness. For example, the published analysis of the CIS contained no estimate of how much the scheme would cost relative to how much avoided CO_2-e it would deliver (DCCEEW 2023b).

The Australian Government should require that all significant new emissions reduction policies are accompanied by a published cost-effectiveness estimate that clearly identifies:

- the costs created by the policy, such as those associated with switching from emissions-intensive activities to clean ones as well as any fiscal costs
- any benefits created beyond emissions reduction, such as innovation spillovers, fuel cost savings and, in the case of electricity, reliability benefits
- the reduction in emissions that the policy will deliver.

The PC's interim report on *Creating a more dynamic and resilient economy* proposed enhancements to the Australian Government's regulatory impact analysis process (PC 2025a). If the PC's proposal is taken up, some major emissions-reduction policies will likely be assessed under the enhanced processes.

State and territory governments should also require that major new emissions-reduction policies are accompanied by cost-effectiveness estimates.

To support this, the OIA could create a document with guidance on how to conduct cost-effectiveness analyses of emissions-reduction policies. Similar documents already exist in other policy areas – for example, the OIA (2024) has a guide to valuing lives saved by policy interventions. Equivalent state and territory bodies could create similar documents or refer officials to the OIA document. Ideally, any guidance on analysing policies' cost-effectiveness would be broadly nationally consistent.

For existing policies, opportunities to assess them against the benchmarks will be provided by periodic reviews. Information on actual costs, benefits and avoided CO_2-e could be used to create cost-effectiveness estimates to compare with TCCVs. The 2026-27 Safeguard Mechanism review should undertake one of these assessments, for example, as should the review of the New Vehicle Efficiency Standard scheduled for 2026 (Parliament of Australia 2024b, p. 4).

Calibrate policies to broadly align with the benchmark

Over time, governments should calibrate policy settings so that the costs that policies create are broadly aligned with the national TCCVs. This will help Australia achieve net zero via a lower-cost combination of emissions-reduction options.

The TCCVs should inform the design of both existing and new policies.

- For example, in the next few years, the Australian Government will need to set the NVES emissions intensity standards for the post-2030 period. This should be guided by the national TCCVs (if they are developed in time). That is, the standards should be set so that the expected per-tonne costs associated with the NVES do not exceed the national TCCVs in the relevant years. Of course, future costs are uncertain and depend on factors like the relative prices of petrol and electricity, the relative costs of producing various car models and the roll-out of EV charging infrastructure. But even if it is a rough exercise, reference to the TCCVs will mean the Government does not set standards which are *significantly* misaligned with the least-cost emissions-reduction pathway.
- For example, if the Australian Government were to include a carbon charge in a future road user charging scheme – an option discussed in section 1.3 – the charge rate should be based on the national TCCVs. That is, road users would pay an amount per tonne of CO_2-e that is at least roughly equal to the TCCV at the time they pay it. This would give road users an incentive to switch to cleaner vehicles or fuels where the cost of doing so is consistent with the least-cost emissions-reduction pathway.

Because of how TCCVs are estimated, some policies will need to be more expensive than the benchmarks. If a broad-based national carbon price were in place, emitters would be incentivised to seek out the lowest-cost emissions-reduction options available, a situation shown in figure 1.3. But without a broad-based price, gaps will likely remain – like the ones discussed in this report – and thus some low-cost options will not be exploited. To achieve Australia's emissions targets, governments will therefore need to deliver some reductions in emissions that are costlier than the estimated TCCVs.

Nonetheless, it will be important to use the TCCVs to guide decisions. Governments should avoid policies that create costs *significantly* greater than the benchmark values.

Draw on the benchmark in accountability reporting

Several government agencies monitor, or will monitor, efforts to reduce emissions and report their findings. For example:

- the Climate Change Authority publishes advice that informs the Australian Government's annual climate change statement – known as Annual Progress Reports – and, at least once every five years, advice on setting Australia's emissions targets (Climate Change Act 2022 (Cth), ss. 14–15)
- future editions of the PC's annual Trade and Assistance Review will draw on the TCCVs to assess the extent of industry assistance provided by the Future Made in Australia program
- the PC's future five-yearly productivity inquiries will examine the costs per tonne of avoided CO_2-e of different policies.

As far as possible, this work should use the national TCCVs as benchmarks if and when they are agreed.

The need that the CCA and PC have for such benchmarks, and their relevant expertise, make them candidates to be the independent agency tasked by the Australian Government to develop and periodically update TCCVs in consultation with relevant government agencies.

Take measures to aid the transition to net zero at least cost

Achieving net zero at least cost will also require governments to take steps not yet discussed in this report.

The PC's focus has been on the three largest contributors to Australia's emissions: the electricity, heavy industry and transport sectors. Because of their size and access to emissions-reduction technologies, the near-term rewards of getting policy settings right are greatest in these sectors.

Yet other sectors matter too, and governments should consider key principles as they seek to expand emissions reduction incentives.

- Policy changes should be part of a broad and well-flagged sectoral approach that addresses barriers to decarbonisation and gives affected parties time to adjust.
- Sectors will need to develop their capacity to respond. Measurement systems need to be developed, supply chains and supporting infrastructure established and innovative domestic technologies fostered (with mechanisms in place to unwind any government support over time).
- Vulnerable communities and consumers should be identified, and equity and transition issues addressed.
- Incentives should not favour one form of technology over another.
- New policies should be assessed via robust cost-effectiveness analysis and designed to broadly align with the agreed TCCVs.

One area that governments will need to attend to is agriculture, which is largely not covered by current policies. Agriculture is a major contributor to emissions: about 15% of Australia's gross emissions come from the sector.[14] Though right now there are 'limited existing technology solutions to reduce agricultural emissions in large volumes' (CCA 2024c, p. 92), there will likely be some viable options in the long term. Policy responses in such a dispersed sector must be designed carefully and interventions tailored to the unique characteristics of different agricultural activities.

Another area requiring attention from governments is emissions from residential and commercial buildings. These emissions come from burning gas and account for about 3% of Australia's gross emissions.[15] Electrification technologies are available to reduce building emissions, and decarbonising the sector is already a focus of some governments. In Victoria, all new homes requiring a planning permit must now be 'all-electric' (Victorian Government 2024, p. 4); and new gas connections are also restricted in the Australian Capital Territory (ACT Government 2023). Governments should use the same policy principles in this area as outlined above, including the principle that policies' cost-effectiveness should broadly align with the national TCCVs.

Last, some emitters or sub-sectors will continue to find it very difficult to reduce their on-site emissions. For them, access to ACCUs or other high-integrity off-site emissions-reduction options will be critical. For example, some activities in several sectors, including heavy industry, transport and agriculture, cannot easily be performed using less emissions-intensive methods – and this will likely remain so, even in the long term. ACCUs and similar options allow businesses engaged in such activities to draw on opportunities for lower-cost reductions in emissions elsewhere in the economy. Extra benefits can also come from ACCU projects that improve biodiversity or which flow from the traditional practices of Aboriginal and Torres Strait Islander people.

It will be important therefore that both the integrity of ACCUs is maintained over time and that enough supply is delivered to meet demand. The Australian Government must ensure that the methods for calculating reductions in atmospheric CO_2-e are reviewed periodically and updated according to scientific and technological developments (CCA 2023, p. 3).

In the long term, the Australian Government should seek to integrate ACCUs into every national emissions-reduction policy. Emitters should be able to comply with relevant emissions-reduction policies by

[14] PC calculations based on data from DCCEEW (2025c).

[15] PC calculations based on data from DCCEEW (DCCEEW 2024d, p. 57, 2025c). Here, building emissions refer to emissions from residential buildings – projected to be 9 Mt of CO_2-e in 2025 – and from commercial buildings – projected to be 4 Mt of CO_2-e in 2025 (DCCEEW 2024d, p. 57).

buying ACCUs as an alternative to reducing emissions on-site. This would enable businesses in 'hard-to-abate' areas to cost-effectively contribute to Australia's climate goals. One advantageous feature of the Safeguard Mechanism is it is already integrated with the ACCU Scheme (section 1.2). Expanding the role of ACCUs into other major policies will not only aid the efficient allocation of emissions-reduction efforts but also create incentives for new investment in ACCU generation.

ACCUs will only become more important as emissions targets become more stringent; allocating credits efficiently will be essential to achieving a lower-cost transition. Once most of the low- and moderate-cost options for reducing emissions are used up, staying within emissions budgets will increasingly become a matter of deciding which hard-to-abate activities should be replaced by clean alternatives and which should continue to create gross emissions matched by removals of atmospheric CO_2-e. If net zero is to be achieved at least cost, ACCUs will need to go to those businesses that need them most: those whose operations that are the *most* difficult and *most* expensive to decarbonise.

To achieve this, it will be critical that emissions-reduction incentives are consistent across the economy. With consistent incentives, the value of ACCUs to businesses would be a function of how costly it is to reduce emissions on-site. But if policies create strong incentives for some businesses and weak ones for others, those with strong incentives might opt for on-site reductions because they are encouraged to by policy settings, not because on-site reductions are cheap in relative terms. And businesses facing weak incentives might opt for ACCUs instead of on-site reductions, pulling credits away from harder-to-abate activities.

The Australian Government should be open to more broad-based carbon pricing arrangements in the future as Australia's decarbonisation effort moves on to the final handful of hard-to-abate activities. Getting the allocations of ACCUs and on-site emissions-reduction 'wrong' could be very costly. A national carbon price would let the market determine these allocations and therefore make it more likely that we get them right.

2. Speeding up approvals for new energy infrastructure

Summary

- **Environmental and other regulatory approvals for infrastructure projects are vital, but they are slowing down the energy transition.**
- **Reforms should seek to both improve regulatory standards and speed up approvals. Much can be done without compromising the environment.**
  - At the Commonwealth level, reforms to the *Environment Protection and Biodiversity Conservation Act 1999* are pressing and overdue.
  - There should be national environmental standards, better regional environmental planning, efficient and robust offsetting arrangements, and clear rules about engaging with local communities and Aboriginal and Torres Strait Islander people.
- **Resources should be focused on assessing projects that are most important to the energy transition. The Australian Government has a list of priority projects, but they need to be assessed faster.**
  - A strike team should be formed to assess priority clean energy projects. The team should be well resourced and have a strong clean energy capability.
  - An independent person with strategic oversight of approvals should be appointed – an Australian Government Coordinator-General – to work across government, break through roadblocks and keep approvals on track.
- **Environmental assessments are largely project agnostic – a carpark and solar farm are treated in much the same way. The law should be changed to allow decision-makers to take into account the fact that a project is important to Australia's clean energy transition.**
- **Faster approvals can reduce emissions, reduce costs for developers, attract investment and make energy cheaper – all of which support productivity growth.**

2.1 Why it is important to speed up approvals

Building transmission lines and grid-scale renewable generation and storage is fundamental to the clean energy transition. To meet our renewable energy targets and ensure a reliable supply of energy as ageing coal power plants retire, Australia needs to install large numbers of wind farms, solar farms and 'big batteries,' along with thousands of kilometres of transmission lines.

Clean energy projects are not without risks and costs. They can affect local habitats and communities, cultural heritage sites, businesses and industries. They can impede views and cause noise. And these impacts are not confined to a few small areas: according to one estimate, 111,000 square kilometres of the Australian landmass – 1.7 times the area of mainland Tasmania – could be needed for renewable infrastructure by 2060 (Pascale et al. 2025, p. 1).

Although the need for laws to avoid or minimise these impacts is broadly recognised, planning and approvals processes to ensure compliance with those laws can be unnecessarily slow and complex. Slow approvals are one of the top challenges affecting business confidence in the clean energy industry and an ongoing challenge (Clean Energy Council 2023, p. 21). Planning and environmental assessments are two of the top four challenges experienced in renewable energy development, according to a July 2025 survey of clean energy developers and investors (CEIG 2025a, p. 5).

The Business Council of Australia submitted:

> Timely permitting and approval processes – backed by genuine community support and benefits sharing – is mission critical to maximising ambition and achievability of Australia's emission reduction targets. (sub. 16, p. 4)

Other countries face similar difficulties. The European Commission, for example, has said that 'slow and complex permitting processes are a key obstacle to unleashing the renewables revolution and for the competitiveness of the renewable energy industry' (European Commission 2022).

Contributing to delays in Australia is the fact that most large clean energy projects need two sets of approvals. Each state has its own laws for protecting the environment, cultural heritage sites, land-use planning and development. But a project must also be approved under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) if it is likely to significantly impact threatened species, migratory birds, Ramsar wetlands, world heritage sites or other 'matters of national environmental significance'.

A fast and efficient planning and approvals system therefore requires action by both the Australian Government and state and territory governments. There are many factors and processes that affect the rollout of clean energy and these can have a cumulative effect on the cost of the transition and investor confidence. The Australian Energy Market Commission submitted:

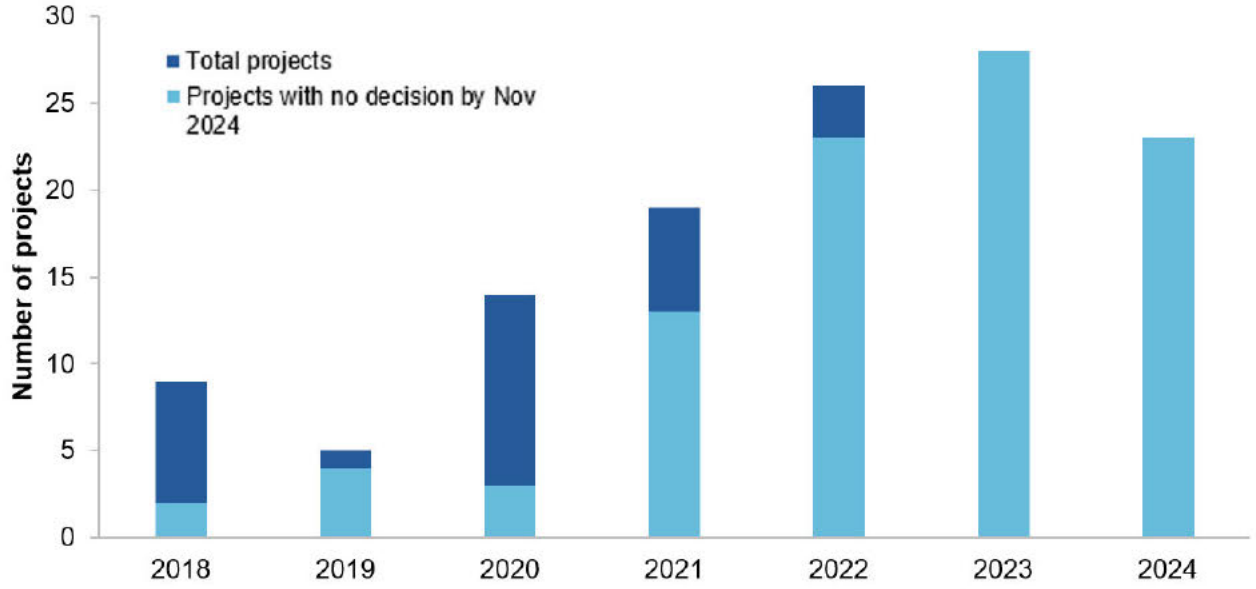
> It is not just the time it takes to approve new projects, but uncertainty over timing, the likelihood of success and the interdependence of multiple approval processes, that can 'chill' the signal for new investment. (sub. 30, p. 8)

Several state governments are reforming their planning and approvals systems and there is still work to be done, but several inquiry participants told us that to speed-up approvals, the EPBC Act was a priority. A recent industry report found 'significant delays' in EPBC Act approvals. Nearly two-thirds of controlled actions referred to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) between 2018 and 2022 (or 45 of 73 projects) were still waiting on a final decision as at 12 November 2024 (figure 2.1), and it took more than 500 days on average for projects that had been finalised to receive a decision

(HSF and CEIG 2024, pp. 3, 17, 18). In May 2025, the Clean Energy Investor Group said the EPBC Act was 'the single biggest barrier to timely, environmentally responsible, renewable energy development in Australia' (CEIG 2025b, p. 1).

This chapter recommends how clean energy projects can be approved faster, without unduly compromising environmental and other regulatory standards. Faster approvals will reduce emissions, reduce costs for developers, attract investment and help give consumers access to cheaper and cleaner energy than a slow approvals system would offer. These benefits will all support national productivity growth.

Figure 2.1 – Many projects referred to DCCEEW between 2018 to 2022 had no decision by November 2024



Notes: Total projects requiring approval is the number of projects referred under the EPBC Act that are controlled actions. Data is sorted according to the year of EPBC Act referral. Source: HSF and CEIG (2024, p. 17).

2.2 Reform national environment laws

Draft recommendation 2.1
Reform national environment laws

The Australian Government should reform environment laws to expedite approvals for clean energy projects and better protect the environment. The reforms should:

(6) introduce national environmental standards
(7) facilitate regional planning, particularly within renewable energy zones, with stricter statutory deadlines for assessing projects in 'go zones'
(8) provide accessible, high-quality information about the environment and past assessment decisions
(9) make offsetting arrangements more efficient, such as by enabling developers to meet their offset obligations by contributing to an Australian Government offsets funds

Draft recommendation 2.1
Reform national environment laws

(10) set clear expectations about engagement with local communities and Aboriginal and Torres Strait Islander people.

Productivity growth is supported not only by fast approvals, but also by effective laws to protect the environment. An influential review of the economics of biodiversity identified the importance of accounting for nature in measures of productivity (Dasgupta 2024, p. 494), something that may receive greater recognition through Australia's experimental National Ecosystem Accounts. Energy policy must also respect Australia's international commitments to protect matters of national environmental significance. Many inquiry participants have warned against compromising environment standards to meet clean energy goals.

Efforts to expedite approvals should therefore aim to complement environmental protections. But a 2020 review by Professor Graeme Samuel found the EPBC Act wanting on both fronts: it did not enable the Commonwealth to fulfil its environmental management responsibilities and was causing unnecessary delays in approvals. The Act was 'not fit to address current or future environmental challenges' and industry viewed it as 'cumbersome', pointing to duplication and slow decision-making, among other things (Samuel 2020, pp. 1, 9).

Inquiry participants have said this is still very much a problem. The Australian Sustainable Finance Institute, for example, said Australia's environmental regulation system 'does not adequately serve the environment, the economy, or society at large' and reform was needed to 'improve outcomes for nature, and accelerate deployment of low-emissions technologies across Australia' (sub. 20, p. 4).

The Australian Government's 2022 Nature Positive Plan (DCCEEW 2022) sought to enact recommendations from the Samuel Review, but only the first stage of the plan was implemented. The government has recently recommitted to establishing Environment Protection Australia and to implementing other recommendations from the review. It has not yet announced a new Plan.

Introduce national environmental standards

A fundamental challenge is that the EPBC Act does not have clear and enforceable environmental standards. It lists matters of national environmental significance and sets out processes for assessing actions that impact those matters, but it does not include national standards or the power to make them.

This results in a system that has been described as 'process heavy and highly discretionary' (WWF-Australia and ACF, qr. 70, p. 3). Neither proponents nor regulators have clear benchmarks, and the Act is largely silent about the environmental outcomes it is designed to achieve.

> This lack of standards – an unthinkable failure in other comparable sectors, for example regarding construction or health and safety standards – also results in risk aversion and delays in assessment processes and approval decisions from regulators, including due to legal challenge concerns. (Australian Climate and Biodiversity Foundation, sub. 38, p. 11)

National environmental standards would provide greater clarity and certainty about the environmental outcomes that must be achieved when a project affects a matter of national environmental significance. They would make it easier for proponents to plan their projects, find cost-effective ways to comply with the law and prepare their impact assessments. Higher-quality impact assessments should also reduce the need for

regulators to later ask proponents for additional information; such requests for information extend statutory deadlines through 'stop-the-clock' provisions in the Act.

The standards would help regulators assess projects, making regulatory decisions more consistent and predictable. As discussed below, they would also further facilitate 'single-touch approvals' through bilateral agreements between the Australian Government and state and territory governments.

Standards could be made about a range of matters, including matters of national environmental significance, engagement with local communities and Aboriginal and Torres Strait Islander people, regional planning and environmental offsets (DCCEEW 2022, p. 1). For example, a draft standard for matters of national environmental significance released in 2023 included:

- overarching requirements for all decisions: for example, the requirement that decisions must 'maintain and improve conservation, management and, where relevant, recovery of [matters of national environmental significance], consistent with the principles of ecologically sustainable development' (DCCEEW 2023a, p. 28)
- more specific requirements: for example, decisions about world heritage must, among other things, 'protect, conserve and rehabilitate ... the Outstanding Universal Value of the World Heritage property' and deliver a 'net positive outcome for the Outstanding Universal Value of the property'. (DCCEEW 2023a, p. 29)

The introduction of standards is broadly supported by conservation groups, the clean energy industry and business and industry more generally. The Clean Energy Investor Group has said that creating national standards was critical and urgent:

> This is a key priority for the renewable energy sector, which is prepared to actively participate in finalising standards aimed at achieving efficient approvals with significantly improved environmental outcomes. (CEIG 2024, p. 5)

The Renewable Energy Alliance said standards should 'apply at all scales, including individual actions, decisions, plans and policies; set clear boundaries for decision-makers, be legally binding and enforceable; and be consistent rules that apply to all' (Renewable Energy Alliance, qr. 16, p. 2).

Environment groups said standards can provide 'much clearer guidance up front on unacceptable impacts' and form the basis for 'more strategic and effective approaches to project approvals, such as regional planning' (WWF-Australia and ACF, qr. 70, p. 3).

The introduction of legally enforceable national environmental standards was the main recommendation of the Samuel Review (Samuel 2020, p. 1). The Australian Government agreed to introduce them in the third stage of its Nature Positive Plan. Drafts for some standards were later circulated for consultation.

The PC recommends that the EPBC Act be amended to introduce standards as soon as possible.

Standards would support bilateral agreements

National environmental standards would also support bilateral agreements, the primary mechanism for reducing unnecessary duplication between jurisdictions. Clear, legal standards would put the Australian Government and state governments 'on the same page', giving the Australian Government greater confidence that environmental impacts are being assessed and managed appropriately when a state government conducts an assessment under a bilateral agreement.

The Australian Climate and Biodiversity Foundation said that not having clear national benchmarks for environmental protections has made it 'functionally impossible' to evaluate and accredit state systems as meeting federal legislative requirements.

> The foundational building block of any accreditation of state approvals regimes – and the efficiency benefits this could generate for project approvals – must be clear national environment standards, as envisaged by the Samuel Review. (sub. 38, p. 11)

Australian Energy Producers said that planning and approvals can be accelerated 'through nationally harmonised standards and mutual recognition of regulatory decisions across jurisdictions' (qr. 81, p. 3). Australian Industry Group similarly said that 'national standards applied by accredited States could produce substantial improvements in decision timeline and administrative burdens' (AiGroup, qr. 52, p. 5).

National standards would improve the operation of the bilateral *assessment* agreements that are already in place and pave the way for the use of bilateral *approval* agreements, which have never been used.

Under bilateral assessment agreements, the Australian Government uses state and territory assessments to decide whether to approve a project under the EPBC Act (DCCEEW 2025h). Proponents no longer need to prepare separate environmental impact statements for state and EPBC Act approvals. Bilateral assessment agreements have been in place with every state and territory since 2015, although some – such as the agreement with Queensland – need to be updated.

The EPBC Act also provides for bilateral approval agreements, under which states and territories would also make the final decision about whether to approve a project under the EPBC Act. But these agreements have never been made, partly because under current arrangements it is difficult for the Australian Government to be completely confident in the decisions of the states and territories. By clarifying the law, national environmental standards would help to build this confidence. The standards, along with a robust accreditation process and the ability for the Australian Government to intervene when necessary, can pave the way for approval agreements (Samuel 2020, p. 121) and thereby expedite approvals.

Outcomes-based conditions

Projects are often approved subject to conditions, of which there are several kinds. For example, proponents can elect to submit an 'action management plan',[16] which must then be approved by the Minister before starting construction. The use of management plans appears to have grown and to be contributing to delays (Samuel 2020, pp. 83, 85).

Using outcomes-based conditions is generally faster than management plans and aligns with the rationale for introducing outcomes-based national environment standards. These conditions set out an outcome – no net-loss to habitat of a species, for example – that a proponent must meet, but leave the proponent to decide how the outcome will be achieved. This approach, with appropriate monitoring and reporting arrangements, may also better protect the environment by making proponents responsible for meeting outcomes, using the most effective methods available.

The introduction of national environment standards, while not strictly necessary to outcomes-based conditions, would support the use of these conditions, and the policies should be aligned.

Some proponents prefer management plans. By setting out precisely what proponents need to do upfront, management plans can provide them with greater certainty. Where management plans are used, there should be clear and transparent timeframes and processes for reviewing and approving them.

The Clean Energy Investor Group has recommended various other ways DCCEEW can improve approval conditions, including by developing standard conditions and avoiding conditions that duplicate or are inconsistent with state or territory conditions (HSF and CEIG 2024, p. 24).

[16] EPBC Act, ss 132B, 134.

Adopt a risk-based approach to assessments

Excessive risk-aversion in the approvals process can cause delay. For example, proponents may be asked to prepare unnecessarily long assessment documents or respond to multiple requests for additional information, perhaps to address relatively minor issues. These concerns have been raised by the clean energy industry (HSF and CEIG 2024, pp. 20–22).

Replacing process-heavy laws with clear, outcomes-based national standards can help to address this problem and facilitate risk-based assessments and conditions. A risk-based approach to EPBC assessments involves applying assessment pathways proportionate to the level of environmental risk a project poses, and focusing assessments and requests for information on clear, material risks to matters of national environmental significance. This approach can facilitate a less costly approvals process that delivers more for the environment (PC 2020b, p. 160).

Some jurisdictions have explicitly adopted this approach. For example, Victorian ministerial guidelines state:

> A risk-based approach should be adopted in the assessment of environmental effects. Suitably intensive methods should be applied to accurately assess matters that pose relatively high risk of significant adverse effects and to guide the design of strategies to manage those risks. Simpler or less comprehensive methods of investigation may be applied to matters that can be shown to pose lower risk. (Victorian Department of Transport and Planning 2023, p. 9)

Without legislative change, the scope to use risk-based assessments under the EPBC Act may be limited. However, to the extent it is possible, the Minister should set expectations about how the approach might be used within the existing legal framework. Supporting policies should then be amended to reflect these expectations, providing assessors with concrete guidance about how to manage different types of risk.

Facilitate regional planning

Regional planning can improve the speed and efficiency of the approvals process. Rather than assessing the environmental impact of each project separately, regional plans assess in advance the suitability of a broader region or landscape for multiple projects (DCCEEW 2022, pp. 3, 19–20).

Regional plans can identify ‘go-zones’ suitable for sustainable development, and ‘no-go-zones’ that are clearly unsuitable for development. Projects in go-zones could have streamlined assessments and stricter statutory deadlines for approvals (for example, through limits on stop-the-clock provisions). Some might even be approved without a separate assessment, if the regional plan has identified and addressed all relevant risks. Development in no-go areas of high environmental value, on the other hand, would be heavily constrained or prohibited, preventing developers from wasting time and resources on projects that are unlikely to be approved and thereby supporting productivity growth in the industry.

Regional planning could also reduce duplicated assessments and allows cumulative environmental impacts from multiple projects to be considered. A number of inquiry participants said it was important to consider these cumulative impacts (Queensland Conservation Council, qr. 37, p. 3; Australian Energy Infrastructure Commissioner, qr. 23, pp. 2–3; Electrical Trades Union of Australia (ETU), qr. 39, pp. 2–3).

Regional plans can also enable communities to better understand and take part in decisions about cumulative impacts and key threats.

Regional plans should consider a range of matters, but they do not need to be comprehensive. In fact, making comprehensive plans might be slow and inefficient. A landscape-scale assessment of several key impacts would increase efficiency, even if matters remained to be assessed on a project-by-project basis.

The EPBC Act allows bioregional plans and 'strategic assessments' to be made, but these provisions have not been used often (Samuel 2020, p. 44). Some maintain the Australian Government could use strategic assessments more proactively (Climate Council 2023, p. 10), but these assessments are generally considered complex and rigid (Samuel 2020, p. 78). The Act should be amended to better facilitate regional planning.

The Samuel Review proposed reforms for doing that, and the Australian Government agreed, saying regional plans can speed up decision-making without compromising environmental standards (DCCEEW 2022, p. 19). The government said it would create a national environmental standard for regional planning, with regional plans pre-identifying areas for protection, restoration and sustainable development (DCCEEW 2022, p. 3). It is also talking with all state and territory governments about pilot regional plans for renewable energy and working on pilot plans in some states (DCCEEW 2024i).

The PC recommends the Government pursue reforms to better use regional planning to facilitate faster assessments and approvals, with stricter statutory deadlines for assessing projects in 'go zones', and progress regional planning to the extent possible until those reforms are enacted.

Prioritise regional plans within renewable energy zones

Regional planning should be given priority within state renewable energy zones (REZs), which bring multiple clean energy projects together in prescribed areas.

> [REZs] are selected for the quality of their renewable resource, and their proximity to consumers, existing transmission and available skilled workforces. The REZs are a place-based way to build and coordinate electricity assets, with a more holistic approach to the needs of the energy transition and the aspirations of regional communities. (AEMO 2024, p. 52)

Renewable energy zones have the potential to 'greatly reduce the overall cost and disruption of the energy transition' (AEMO 2024, p. 53). The Clean Energy Council submitted that the zones were meant to be a properly planned process to facilitate the energy transition:

> While it is crucial that transmission routes be determined, it is equally crucial that planning matters within the REZs – e.g. cumulative impact assessment and acceptance of things like visual amenity, biodiversity impact, road and transport issues etc – are dealt with in a coordinated manner. Failure to do this by any jurisdiction has led to more confusion and uncertainty not just for proponents but for host communities. (Clean Energy Council, qr. 25, p. 2)

Renewable energy zones are expected to house a significant proportion of clean energy projects in Australia and each zone will house multiple projects. Making regional environmental plans within the zones is therefore a priority and should expedite both state and federal environmental approvals processes. Information gathered when selecting the zones could be used in the regional plans. Future regional environmental plans could also inform decisions about the boundaries of future zones.

Provide greater access to information

Detailed data about the environment and cultural heritage

Giving proponents, communities and regulators access to high-quality information about the environmental and cultural heritage attributes of an area – such as detailed maps showing the condition and location of nationally significant plants and animals – can expedite the approvals process and reduce costs.

This information can help proponents decide where to locate their projects, reduce risks to the environment, and prepare environmental impact statements. It would inform approval decision-making and regional planning and help communities understand the effects of a project on local environments and engage with development proposals. The information would shed light on changes to the environment over time, which would inform broader evaluations of the effectiveness of the EPBC Act.

Some information is already available. For example, Environment Information Australia in DCCEEW has on its website a protected matters search tool and an 'environmental values viewer'. DCCEEW also has a public portal with detailed descriptions of individual projects, their status, decision notices and other information.

But there are gaps. The Clean Energy Investor Group said that 'poor data availability and mapping tools, particularly in relation to land use constraints, environmental sensitivities, and cultural heritage values', was leaving information gaps and causing assessment delays (Clean Energy Investor Group, qr. 12, p. 2).

Some of this information may simply not be available. For example, 'precise critical habitat mapping is missing for most of Australia's endangered species' and 'most ecosystems, especially those that are considered at high risk of collapsing have yet to be mapped' (Pascale et al. 2025, p. 7).

Other information may exist but not be readily available, so proponents need to invest in it themselves. WWF and the Australian Conservation Council said there is a considerable amount already in existence that should be made 'more accessible or fit for purpose' (qr. 70, p. 3). Fortescue said that regulators have 'huge volumes of environmental data' that would be 'incredibly valuable' to proponents and improve the quality of assessments (qr. 80, p. 5).

The Australian Climate and Biodiversity Foundation submitted:

> The lack of publicly available, consistent environmental data that is linked to national environmental priorities and approvals benchmarks has been a long standing constraint on efficient approvals processes. This results in resource and time intensive data collection by proponents, repeated information requests, and difficulties in making assessment decisions due to data deficiencies. (sub. 38, p. 16)

The PC recommends that the Australian Government provide this information, with appropriate protections for culturally and commercially sensitive information.

Providing an authoritative source of high-quality information about the environment, including a public register of national environmental information assets, was to be the core function of the Head of Environment Information Australia, a position which the Australian Government has previously sought to establish. Creating this role in law was intended to protect the ongoing integrity and independence of environment data, information and reporting (Explanatory Memorandum for the Nature Positive (Environment Information Australia) Bill 2024, p. 2).

Publish reasons for decisions

Providing broader access to statements of reasons for decisions under the EPBC Act would fill another information gap. Currently, a statement is only prepared if a proponent requests one. Relatively few proponents make such requests and the statements that are prepared are not published on DCCEEW's website.

Publishing statements of reasons would provide useful information for both proponents and decision-makers. For example, the reasons might shed additional light on what is considered a controlled action and on the efficacy of particular approaches and technologies, such as raising the height of a wind turbine or installing

ultrasonic acoustic deterrent devices. Publishing reasons would also encourage rigour and consistency in decision-making.

Again, sensitive information would need to be protected. For example, proponents could be given the opportunity to review information about their projects before publication, as the Law Council of Australia has suggested (Senate Environment and Communications Legislation Committee 2024, p. 52).

Some countries require statements of reasons to be prepared and published – for example, these statements appear on Canada's online impact assessment registry (Canada nd).

Preparing reasons takes time and resources and may not be necessary for all decisions made under the Act, but they should at least be published for the most significant and informative decisions. The PC has previously recommended that statements of reasons be published for approval decisions and conditions for all major projects (PC 2013, p. 211). The Samuel Review recommended that reasons be published for any decision that is inconsistent with the proposed national environmental standards (Samuel 2020, p. 53).

Improve the efficiency of offset arrangements

After all reasonable steps to avoid or mitigate a project's environmental impact have been taken, proponents are often required to undertake to offset any significant residual harm. This involves taking some action to compensate for those impacts. Offsetting allows 'environmentally-damaging but economically-valuable developments to go ahead without causing a 'net loss' of overall environmental quality' (PC 2020b, pp. 205–206).

Under the EPBC Act environmental offsets policy, 90% of a proponent's offset requirements must be met through direct offsets, such as improving habitat for the protected matter or reducing threats to the protected matter (DSEWPC 2012, p. 18). The policy lays out several requirements – for example, offsets must be like-for-like, proportionate and additional to what is already required (DSEWPC 2012, pp. 16–24). For example, if a project involves clearing the habitat of a threatened species, the proponent may provide a direct offset by revegetating a nearby area of the same habitat type and same or greater size as the cleared land.

Proponents often find it hard to meet environmental offset requirements. It is not their core business, and planning and delivering direct offsets can be difficult (HSF and CEIG 2024, p. 24). While inquiry participants have not called for offset policies to be significantly relaxed, efficiencies can be found, as discussed below.

Biodiversity credit schemes and offset funds

Some state and territory offset schemes allow proponents to discharge their offset obligations in ways other than delivering direct offsets. (NSW DCCEEW 2025; Queensland DESI 2024, p. 18). Proponents can:

- purchase and retire like-for-like biodiversity credits (generated when landowners commit to protect and enhance the biodiversity values on their land (stewardship sites), and able to be sold on a credits market)
- make payments into government-run offset funds or accounts that then take on the proponent's offset obligations (the funds may then acquit the offset obligations by retiring credits or funding conservation actions).

These options can help proponents progress through the regulatory process faster, saving them from preparing and obtaining approval for plans to deliver direct offsets (PC 2020b, p. 212).

If implemented well, these schemes can also improve environmental outcomes. The core business of the body administering the fund is to deliver offsets, making them better placed to carry out projects that produce

the greatest environmental gains. And by pooling funds, the administering body may be able to implement larger, strategically coordinated projects that may deliver greater environmental benefit than several smaller projects would (PC 2020b, p. 212).

An Australian Government offsets scheme

The Australian Government should assess whether it can allow proponents to use more of these state schemes to discharge their obligations under the EPBC Act. To meet Commonwealth requirements, states and territories may have to update or improve their schemes.

However, some states and territories do not have offset schemes. To ensure coverage across all jurisdictions, the Australian Government should establish an offsets scheme under which proponents can discharge their offset obligations under the EPBC Act by purchasing and retiring like-for-like biodiversity certificates, or by paying into a fund that would take on its offset obligations. Industry has expressed support for this approach (HSF and CEIG 2024, p. 25).

In late 2023, the Australian Government passed legislation to establish the Nature Repair Market, under which landowners can earn and later sell biodiversity certificates. These certificates cannot be purchased for offsetting purposes.[17] The government should consider amending the Nature Repair Market legislation to allow proponents to discharge their offset obligations by purchasing certificates that comply with offset rules.

The Australian Government should also establish an offsets fund that proponents can pay into to discharge their offset obligations. Once the proponent has paid into the fund, the fund would then take on the proponents' offset obligations.

Improving the operation and integrity of offset schemes

The PC acknowledges that offset schemes have been criticised for failing to adequately compensate for environmental harms. For example, proponents and the NSW Biodiversity Conservation Fund have struggled to find like-for-like biodiversity credits due to a lack of supply, and many stewardship sites were not being monitored to assess if they were delivering adequate environmental gains (Audit Office of NSW 2022, pp. 2, 8; Henry et al. 2023, p. 24). An audit of the effectiveness of the biodiversity offsets scheme and an independent review of the *Biodiversity Conservation Act 2016* (NSW) made several recommendations to improve the NSW scheme, including to:

- improve the accessibility of key market information (such as credit prices and forecasts of credit demand and supply) to support market development (Audit Office of NSW 2022, p. 10)
- set time limits for the trust to discharge its offset obligations (Henry et al. 2023, p. 31)
- implement a quality assurance process for stewardship sites (Audit Office of NSW 2022, p. 10).

An Australian Government offsets scheme should be governed by rules and policies that support the scheme's integrity. It should consider the relevant recommendations from the NSW audit and review when designing and implementing the Commonwealth offsets scheme, and lay out clear rules to deliver adequate environmental outcomes in a national environmental standard for offsetting (see discussion above).

Build community support for clean energy projects

Securing social licence from local communities is crucial to building energy infrastructure while avoiding costly delays and legal challenges. Communities bear most of a project's negative impacts, while the benefits of clean and reliable energy are shared more broadly. Communities have a right to be heard, yet

[17] *Nature Repair Act 2023* (Act No. 121 of 2023), s.76A.

they often complain that developers take a 'tick-the-box' approach to engagement, rather than genuinely listening to local views.

Engaging with Aboriginal and Torres Strait Islander people is vital. A significant proportion of energy projects are built on land over which Aboriginal and Torres Strait Islander people have rights, interests and mutual obligations. Potential impacts on cultural heritage sites, for example, should be a key consideration for developers.

Poor community engagement practices can also slow down development. Wimmera Southern Mallee Development said that most serious delays happen 'when early engagement has been rushed, when risks haven't been properly identified, or when the infrastructure design doesn't fit the region's capacity to absorb it' (qr. 30, p. 4).

The Clean Energy Council said the sector had been working hard to improve its 'social performance' and there was more to be done, but warned against placing excessive burdens on industry that could lead to higher project costs and electricity prices (qr. 45, p. 3). Fortescue said it was critical to balance the need for reasonable consultation with facilitating project delivery (qr. 80, p. 5).

A number of state governments in recent years have sought to improve the standard of consultation with local communities, but there may be opportunities to harmonise the various guidance materials, standards and obligations for community engagement and benefit sharing that some say have 'proliferated' across Australia:

> While these efforts are commendable, the industry now increasingly faces a patchwork landscape of obligations, which can be complex and inefficient to administer for proponents and investors operating at a national level. (Clean Energy Council, qr. 45, p. 3)

National standards for engagement

National standards for engagement can both clarify expectations and raise the bar for the quality of consultation. Standards should be developed for both engagement with local communities and engagement and participation in decision-making with Aboriginal and Torres Strait Islander people, as envisaged in the Nature Positive Plan (DCCEEW 2022, p. 12).

Standards for engagement with Aboriginal and Torres Strait Islander people should build on the 2024 First Nations Clean Energy Strategy. The strategy highlights the need for equitable partnerships and shared decision-making and says governments need to 'both improve awareness and knowledge sharing regarding clean energy, and support First Nations organisational capacity to understand and act on opportunities' (DCCEEW 2024g, pp. 19, 28). As the PC has noted in other contexts, in line with priority reforms in the National Agreement on Closing the Gap, engagement should be 'meaningful, respectful and reciprocal', with transparent, accountable mechanisms through which Aboriginal and Torres Strait Islander people can inform and share decision-making (PC 2023d, p. 19).

In this inquiry, the PC has heard that appropriate resourcing of Aboriginal and Torres Strait Islander groups could make their engagement with clean energy developers more effective and efficient. Building this capacity is particularly pressing for projects identified as high priority for fast approvals, as discussed later in the chapter.

Other initiatives

The Renewable Energy Developer Rating Scheme is a promising initiative to incentivise good engagement practices more generally. The scheme was recommended by the Australian Energy Infrastructure

Commissioner (Dyer 2023, p. 7) and is currently being designed. It could be tied to other government programs. For example, a developer's score could be a criterion for inclusion on the priority list discussed below. The more consequential a developer's rating becomes, the greater the need for the ratings process to be rigorous and transparent.

Regional planning, discussed above and recommended in the Dyer report (Dyer 2023, p. 21), can also make community consultation more efficient and effective, which is likely to help secure community support for projects.

But the Australian Energy Infrastructure Commissioner has recently said the Dyer report was not being implemented fast enough. There was a risk of leaving communities behind in the energy transition and 'letting frustrations fester' (Williamson 2025). Clear national legal standards for engagement would help ensure that does not happen, while giving developers more clarity and certainty about their projects.

Improve benefit sharing

While largely a state responsibility (and therefore not the focus on this chapter) benefit sharing arrangements are important for securing community support for clean energy projects and thereby reducing commercial risk for developers and speed up approvals. There has been a growing recognition of the importance of community benefit sharing, with multiple state governments recently releasing guidelines or taking other initiatives to set clear expectations for proponents (for example, PoweringWA 2025; ReCFIT Tasmania 2024; NSW DPHI 2024).

Benefit sharing can be done in several ways. Developers might contribute to community benefit funds, make goodwill payments to neighbouring properties, enable locals to have an equity stake in a project, create employment opportunities and build local infrastructure such as roads and parks.

To be effective, benefit sharing should be tailored to communities. Separate benefit sharing arrangements with Aboriginal and Torres Strait Islander people may sometimes be appropriate. The Clean Energy Council, which has published a Guide to Benefit Sharing Options for Renewable Energy Projects (Clean Energy Council 2019), told the PC that:

> benefit sharing approaches must be developed through meaningful consultation with host communities, and should not be prescriptive, one-size-fits-all 'solutions'. This recognises that every community is different and has different priorities and interests depending on their circumstances. (Clean Energy Council, qr. 45, p. 2)

Benefit sharing should also provide ongoing value and be proportionate to the scale of the project and its impact on the community; some arrangements have been called 'inconsequential considering the size and value of projects' (Dyer 2023, p. 49; see also CCA 2024c, p. 35; NSW DPHI 2024, p. 14).

One efficient way to share benefits involves developers contributing to a central regional fund. The fund administrator, such as the local council, works with the community to decide how the funds will be spent. Developers do not have to negotiate separate arrangements with multiple communities, and communities do not have to deal with multiple developers, reducing engagement fatigue.

Centralised funds also enable money to be spent more strategically and on larger community projects. The Community Power Agency sees 'great potential' for community benefit sharing funds to be 'pooled and invested for long-term legacy impacts' and to 'seed local enterprise and community development initiatives' (qr. 49, p. 5). Their Guide to Regional Benefit Sharing says:

> There is a clear need to support communities to identify legacy priorities that may be funded through a regional benefit sharing program. This presents an opportunity to reduce the risk of

> engagement fatigue and empower communities to proactively plan, prioritise and deliver legacy outcomes from renewable energy development. (Community Power Agency 2025, p. 5)

If the amount of contributions is known up front, proponents have greater certainty about the cost of benefit sharing. They know how much to contribute, and communities know how much they will receive. Under Victoria's proposed Renewable Energy Zone community fund arrangement, for example, transmission companies will have to contribute a fixed amount per kilometre of transmission line they install (VicGrid 2024, p. 13).

Effective governance arrangements for these funds are vital: communities must have confidence the money is being well spent.

2.3 Focus on priority projects

In March 2025, the Australian Government published the National Renewable Energy Priority List. The list is designed to provide 'coordinated support for regulatory planning and environmental approval processes for identified priority renewable energy projects across Australia' (DCCEEW 2025f).

If approved and built, the 56 projects on the list could deliver an additional 16 GW of generation capacity and 6 GW of storage capacity across the nation, alongside transmission projects to connect renewables into the grid (DCCEEW 2025f). Delivering these projects would make a significant contribution to meeting Australia's emissions reduction and renewable energy targets.

DCCEEW has been allocated additional funding to provide priority projects with tailored support, which may include guidance for proponents and opportunities to identify and resolve potential issues early (DCCEEW 2025f). This support is intended to accelerate EPBC Act assessments – 'faster to yes, faster to no' – without reducing scrutiny or exempting projects from statutory requirements (DCCEEW 2025d).

The PC has heard that proponents welcome the additional support but have not yet seen a material impact to the speed of the process. To expedite approvals for priority projects, the PC recommends two reforms: (1) the establishment of a strike team to assess priority projects, and (2) the appointment of a Coordinator-General to work across governments and break through roadblocks.

Set up a specialist 'strike team' for priority projects

Draft recommendation 2.2
Set up a specialist 'strike team' for priority projects

The Department of Climate Change, Energy, the Environment and Water should set up a strike team focused on priority renewable energy projects. The strike team should:

(1) be adequately resourced to ensure all priority projects can be efficiently assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)
(2) integrate environmental and clean energy expertise
(3) be issued with clear expectations, tools and escalation procedures
(4) work with state and territory counterparts to reduce duplication and share information and expertise.

Several inquiry participants and industry have said assessment teams are often under-resourced (CEIG, qr.12, p. 2; ENGIE, qr. 18, p. 2; Renewable Energy Alliance, qr. 16, p. 2), and that some officers have a limited understanding of some of the unique characteristics of renewable energy (HSF and CEIG 2024, p. 19). Fortescue said there seemed to be little collaboration between the part of DCCEEW working on green energy and the part protecting the environment – and that, if anything, they 'are working at cross-purposes' (qr. 80, p. 10).

Given the urgency of the energy transition, DCCEEW should establish a strike team to assess priority clean energy projects under the EPBC Act. The team should work exclusively on priority clean energy projects and be adequately resourced to assess all priority projects in a timely manner. This will provide priority projects with the attention they need to progress efficiently through the assessment process.

The strike team should have a strong capability in clean energy projects – experienced assessment officers who understand the industry or particular parts of it, such as windfarms – and work closely with their energy colleagues in the department.

The team should be set clear expectations and conduct assessments in line with best practice. It should:

- apply a risk-based approach where possible, for example by only issuing necessary and targeted requests for additional information
- provide greater transparency about progress against statutory timelines and the use of 'stop-the-clock' provisions
- work collaboratively with state and territory colleagues.

State and territory governments should consider establishing similar strike teams focused on priority list projects. The national strike team should work with states and territories to minimise duplication and share information. Out-posting officers to state and territory offices can strengthen cooperation and build an understanding of each other's processes (HSF and CEIG 2024, p. 21; PC 2020b, p. 178).

Establish an Australian Government Coordinator-General for priority projects

Draft recommendation 2.3
Establish a Coordinator-General for priority projects

The Australian Government should establish an independent Clean Energy Coordinator-General for priority renewable energy projects. The Coordinator-General should:

(5) track the progress of all approvals needed to start construction
(6) investigate and help resolve delays
(7) report on progress to the Energy and Climate Change Ministerial Council
(8) provide advice based on objective criteria about the composition of the National Renewable Energy Priority List.

To further expedite the approval of priority clean energy projects, an independent Australian Government Clean Energy Coordinator-General with strategic oversight of approvals should be appointed.

The Coordinator-General should be tasked with working with all relevant regulators and approval bodies including Commonwealth, state and territory environmental, heritage and planning bodies, the Foreign Investment and Review Board, and the Australian Energy Market Operator for network connection approvals.

The Coordinator-General should:

- **Track the progress of priority projects through approvals processes and report to ministers.** This will provide continued focus on delivering priority projects and increase transparency and accountability. There should be regular reporting to the Minister for Climate Change and Energy, the Minister for Environment and Water, and when necessary the Energy and Climate Change Ministerial Council.
- **Identify and help to resolve roadblocks.** When a priority project hits a roadblock in an approvals process, the Coordinator-General should be empowered to escalate the matter by raising it with the relevant departmental secretary or even relevant ministers, when appropriate. Once the roadblock has been resolved, the Coordinator-General should recommend improvements to regulators' practices to prevent similar delays from occurring again.
- **Work with other bodies to assist Aboriginal and Torres Strait Islander communities.** These communities may need additional capacity to engage effectively with the significant number of proponents building infrastructure across the country. The Coordinator-General should work with relevant government bodies to assist these communities to engage with proponents of priority projects.
- **Recommend updates to the priority list,** as discussed below.

The Climate Change Authority has recommended establishing an Energy Transition Coordinator with some similar responsibilities (CCA 2024b, p. 68).

The Coordinator-General should sit within a central agency and work across the Australian Government and with its state and territory counterparts. It should work cooperatively with related agencies such as the Major Projects Facilitation Agency and the proposed Future Made in Australia Front Door, and its functions should be defined to avoid overlap with these bodies.

Composition of the priority list

An independent Coordinator-General will be well placed to advise on which projects should be on the priority list.

Currently, DCCEEW prepares the list and a delegate of the Minister for Climate Change and Energy approves it. States and territories provide input through the Energy and Climate Change Ministerial Council (DCCEEW 2025e, pp. 3–4).

Transmission projects are drawn from the Australian Energy Market Operator's market analysis and plans and other material (DCCEEW 2025e, p. 3). Generation and storage projects are chosen based on their potential contribution to energy transition targets, proximity to heritage and protected environmental sites, alignment with state and territory energy policies, and other factors (DCCEEW 2025e, pp. 1–3).

There are five generation and storage priority projects for each state and one for each territory (DCCEEW 2025d). As a result, the list includes some relatively small projects and potentially omits some larger ones.

The PC recommends that the Coordinator-General be tasked with recommending updates to the list as projects are approved and new priority projects need to be identified. Projects should be chosen based on their importance to the energy transition and without regard to the jurisdiction in which they are located (except to the extent their location affects their contribution to the transition). In making recommendations,

the Coordinator-General should consult with industry, DCCEEW, the Energy and Climate Change Ministerial Council, the Australian Energy Market Operator, and other relevant bodies.

As discussed above, a proponent's rating under the proposed developer rating scheme could also be added to the criteria for the priority list. This would encourage developers to take part in the scheme and improve their community engagement practices. It would also help to prioritise projects that are less likely to fail to win social licence, which would delay construction.

Some have suggested the list is too short. All projects that are genuine priorities for the transition should be included, and the regulator resourced to ensure they are all assessed efficiently.

2.4 Consider the energy transition in approval decisions

Draft recommendation 2.4
Consider the energy transition in approval decisions

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) should be amended to require the Minister to consider the needs of the energy transition when deciding whether to approve an energy project that will have a significant impact on a matter of national environmental significance.

When deciding whether to approve a project that will affect a matter of national environmental significance, the Minister must currently consider a number of factors, including the principles of ecologically sustainable development and 'economic and social matters'.[18] But the Minister is not explicitly required to consider how a project might affect Australia's energy transition.

The EPBC Act is largely agnostic about the type of project under consideration. The focus of an assessment is on how a 'controlled action' will affect the local environment. A carpark and a solar farm that would have the same effect are therefore treated in much the same way.

Inquiry participants had mixed views about whether clean energy projects should be treated differently to other projects for the purpose of environmental approvals. While few commented specifically on the statutory considerations, some stressed that clean energy projects should be treated the same as other projects, while others argued that the urgency of the transition meant clean energy projects should get some special treatment. No one argued that clean energy projects should get a 'free pass'.

The PC recommends that the EPBC Act be amended to require the Minister to consider the needs of the energy transition when deciding whether to approve an energy project. This would not be a determinative factor but rather a relevant consideration, like the 'economic and social matters' the Minister must already consider. It might be argued that the needs of the energy transition can already be taken into account when considering 'economic and social matters', but an explicit reference to the energy transition would nevertheless highlight its importance and ensure it was properly considered.

In considering the needs of the energy transition, the Minister should take into account such matters as the urgency of the transition, a project's potential to abate emissions, its size and location, and other specific needs of the energy system, such as firming and system security services. In other words, the energy

[18] EPBC Act, s 136.

system will need some clean energy projects more than others and environmental assessments of a project should consider this.

The PC's recommendation should be distinguished from other options not considered in this report, such as the long-debated 'climate trigger', which would require an EPBC assessment for projects that would generate significant greenhouse gas emissions. The PC is also not proposing an expansion of the national interest exemption in section 158 of the EPBC Act.

The PC's recommendation is intended to be more focused, allowing decision-makers to give weight to the vital importance of some projects to Australia's energy transition without overriding protections for the environment. The reform should be enacted alongside deeper reforms to the EPBC Act discussed earlier in the chapter, such as the introduction of national environmental standards.

2.5 The economic benefits of faster approvals

A faster approvals process is expected to yield benefits for proponents, consumers and the wider economy.

A more efficient process will reduce the direct and indirect costs that proponents incur through the approvals process. Direct costs include the cost of collecting the various types of information regulators require (PC 2020b, p. 156). Indirect costs include delayed revenues caused by projects starting late and overheads, such as the cost of keeping consultants, contractors and internal resources on hold, while waiting for approval to start construction (PC 2020b, p. 157).

The Queensland Renewable Energy Council estimates that 'a 12-month delay in financial close on a $400 million project can add more than $20 million in holding and opportunity costs' (qr. 40, p 4).

Many projects will be built as part of the transition to clean and reliable energy. The Australian Energy Market Operator estimated that the upfront capital cost of all the required utility-scale generation, storage, firming and transmission infrastructure to 2050 has a present value of $142 billion (AEMO 2024, p. 13).. If reforms to assessment processes reduce delays to construction, total cost savings could be significant. Reducing project costs for proponents is likely to hold down power prices.

Faster approvals would also allow more clean energy to come online faster. Available capacity would increase, power prices would be lower, and consumers and the wider economy would benefit. Emissions reductions would be achieved and energy reliability improved. This all supports productivity growth.

The PC is considering modelling these benefits in the final report and seeks information that could be useful for producing these estimates.

Some of the reforms recommended above will also speed up approvals for other industries, but our modelling will focus on benefits flowing from faster approvals of clean energy.

Information request 2.1
Estimating the economic benefits of faster approvals

The PC is seeking information that may be helpful for estimating:

a. the effect on power prices of bringing more capacity online faster
b. the cost savings (both direct and indirect) for proponents from a more efficient approvals process and its effect on power prices.

3. Addressing barriers to private investment in adaptation

Summary

The climate-related risks Australia faces in the future will be more costly if we do not adapt.

- Governments are moving to improve adaptation throughout the economy, including through the development of a National Adaptation Plan. This area will require significant policy focus over the long term.
- As climate risks intensify, boosting our resilience has the potential to lower the costs of disaster recovery and create a healthier, more productive population, with better quality of life.

Housing will require specific attention.

- People's experience of climate change will depend on the resilience of their home. Resilient housing reduces exposure to the health and wellbeing impacts of climate change and the disruption and displacement caused by natural disasters.

The information needed to drive homeowner investments in resilience is lacking.

- The Australian Government should lead work to develop a publicly accessible database of all climate hazards and an outcome-based resilience rating system for housing.

Building on those initiatives, Australian governments should work together and develop targeted policies to improve the resilience of Australia's housing stock over coming decades.

- Agreeing quantifiable goals for improving the resilience of Australia's housing stock over the coming decades should anchor and focus actions, and provide clear signals to the community and market.
- All stakeholders have a role to play. Households need timely and relevant information. Some will need financial support. Governments should invest in public infrastructure where that is an efficient response. Planning and zoning systems need to consider climate risks as Australia's population grows. Targeted measures will likely be needed to progressively uplift the resilience of the existing housing stock.
- Governments will need further information and careful impact analysis to assess any regulatory or spending measures, and careful phasing will be critical in securing resilience benefits at lowest cost.

To support economy-wide adaptation, the Australian Government should legislate for the Climate Change Authority to take on responsibility for monitoring, evaluating and learning in adaptation policy.

- The Authority already plays a similar role regarding emissions reduction, but there is no national, independent body set up to drive accountability and ongoing improvement regarding adaptation.

3.1 Australians need resilient housing

Reducing emissions is essential to limiting the severity of future climate impacts. The draft recommendations in chapters 1 and 2 are designed to help Australia reach its emissions targets in as timely and cost-effective a way as possible.

However, we are likely to face significant climate-related risks regardless of future emissions reductions. Estimates from the United Nations Environment Program and Climate Action Tracker point to a 66% chance that global average temperatures will rise by about 3°C above pre-industrial levels by 2100 (Climate Action Tracker 2024, p. 16; UN Environment Programme 2024, p. 33). Temperature increases could be even higher if emissions-reduction efforts are not maintained.

Whatever the exact trajectory of global emissions, Australia is expected to experience a harsher climate. This will include more extremely hot days, longer fire seasons, more heavy rainfall events over short periods, ongoing sea level rise with more coastal flooding, and fewer but more intense tropical cyclones (BoM and CSIRO 2024, p. 29). The location of hazards is expected to put more people in harm's way, spreading to areas once considered safe (CCA 2025, p. 4).

The costs of not adapting are high. One study estimates that the costs of extreme weather events are projected to grow from around $9 billion a year in 2023 to $35 billion a year by 2050 (Lefebvre and Reinhard 2022, p. 19). Disasters create lasting health effects for households, and negatively affect education outcomes and earnings (CCA 2025, pp. 8–9).

To prepare, Australia will need proactive and coordinated policymaking and investment over the coming decades. Failure to act will be a drain on productivity growth. Without adaptation, labour productivity losses due to increased workplace exposure to heat from a 3-4 degree increase in global temperatures is estimated to reduce economic output by between $135 and $423 billion cumulatively between 2023 and 2063 (Treasury 2023, p. 99). Australia's productivity growth may also suffer from the higher costs of responding to and recovering from disasters – adapting ahead of time can reduce impacts and save costs in the long run, freeing up resources for more productive activities.

Action will be needed across the economy and natural environment. The first pass risk assessment supporting the National Adaptation Plan identified eight different 'systems' where action will be needed (DCCEEW 2024c, p. 9). Victoria and Queensland also have sectoral adaptation plans, covering seven different systems or sectors. These national and state exercises include the built environment.

Large organisations are likely to have strong incentives and capacity to invest in climate resilience. And there are now obligations on critical infrastructure owners and some corporations to report on their exposure to, and mitigation against, natural hazard or climate risks, which will likely encourage investment in those parts of the built environment.

Housing is a sector that must be a critical focus for climate change adaptation so is the focus of this chapter. Housing is both a major asset class and a key determinant of individual and community wellbeing.

- One estimate suggests the number of homes facing high climate risk (excluding heat) could grow from 1 in 23 in 2025 to 1 in 20 by 2050 (Climate Council and Climate Valuation 2025, p. 49). A disproportionate number of Aboriginal and Torres Strait Islander people live in areas that are particularly vulnerable to rising sea levels and extreme weather events, such as the islands in the Torres Strait (Chiew et al. 2022, p. 1629; Lowitja Institute 2021, p. 20; TSRA 2014, p. iii).
- One estimate showed that on average, existing homes only have an energy efficiency rating of 1.7 stars, which makes it more likely they are vulnerable to heat stress (COAG Energy Council 2019, p. 7). About

two in three homes were built before mandatory energy efficiency standards were introduced (CoreLogic and PowerHousing Australia 2022, p. 40) and are therefore less likely to be prepared for extreme heat.

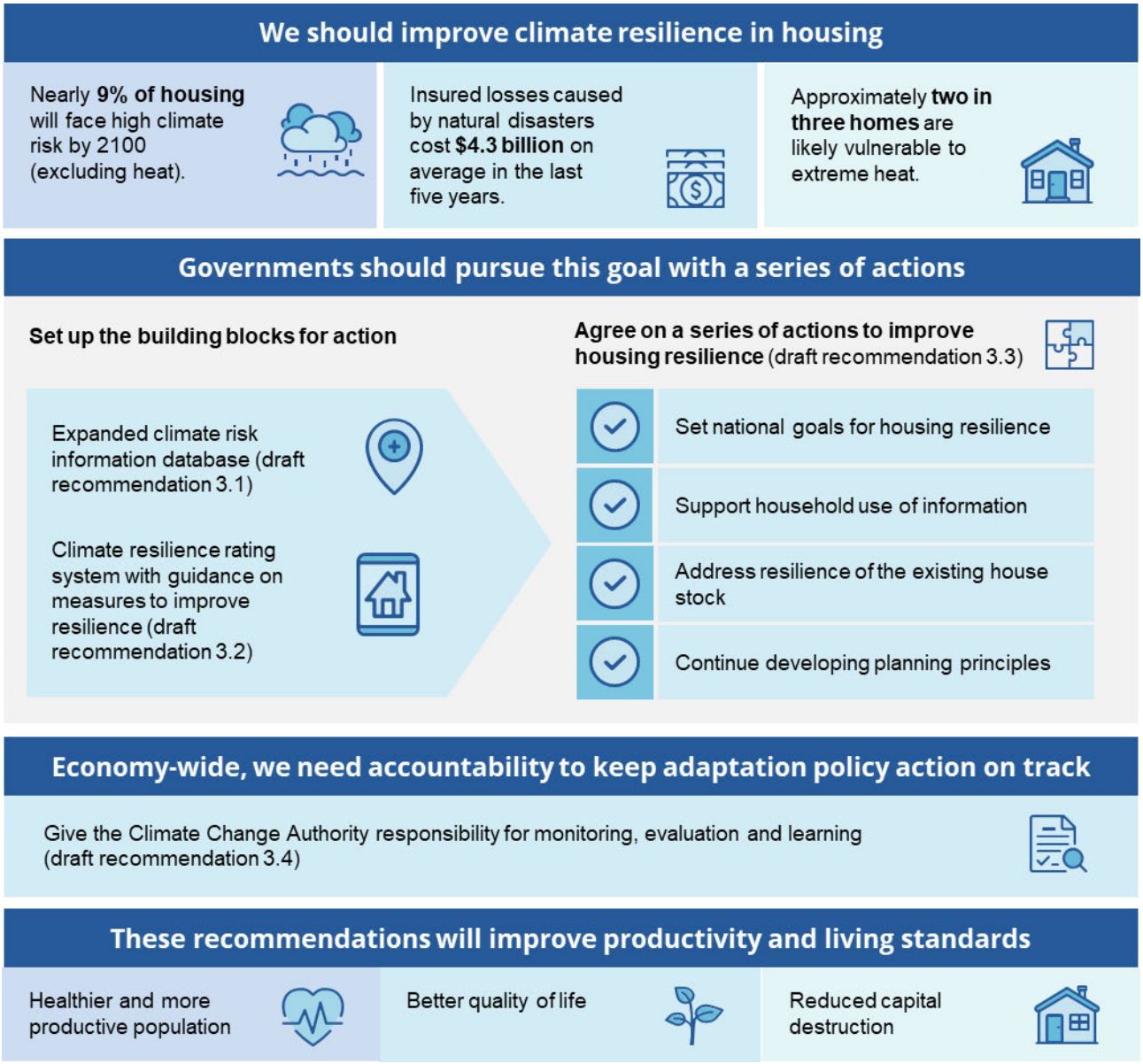
The scale of the challenge – to improve resilience across housing where efficient – is significant. Two-thirds of the housing stock could be vulnerable to more frequent and intense heatwaves (COAG Energy Council 2019, p. 7; CoreLogic and PowerHousing Australia 2022, p. 40). Without adaptation, heatwaves will lead to lower quality of life, poorer health outcomes and reduced labour productivity (DHAC 2023, p. 84; Treasury 2023, pp. 96–98), particularly as working from home arrangements place individuals in their homes during the hottest parts of the day. A smaller but growing proportion of households will face catastrophic risk from more intense natural disasters (CCA 2025, p. 2), which will lead to capital destruction. While not every house faces the same climate risks, many households could benefit from resilience investments.

Housing's design and location influence its vulnerability and exposure to climate hazards such as bushfires, floods and extreme heat. Analysis by the Bushfire Building Council of Australia indicated that only 10% of properties across a number of bushfire risk areas were built to bushfire planning or building regulation standards (Bushfire Building Council of Australia 2020, p. 6). Increasing the resilience of housing to bushfire and other hazards will be a significant undertaking. It will need action from governments and individuals.

Within housing, we have focused initially on measures that can support the investment decisions of households. Without some government action, individual households may find it difficult to make well-informed resilience investment decisions, even when they have financial capacity and where cost-effective investments exist.

The following recommendations are tangible and foundational steps that governments can take to support adaptation and uplift the resilience of Australia's housing stock over time (figure 3.1). The availability of authoritative climate risk information and a resilience rating system will empower investment in resilience. Governments can draw on this information to develop additional measures in cases where households' capacity or incentives will not be enough to drive socially optimal investments in resilience.

Figure 3.1 – Recommendations to uplift the resilience of Australia's housing stock



Provide authoritative climate risk information

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

The Australian Government should coordinate with relevant federal, state and territory organisations to support development of a central climate-risk information database to cover all climate hazards in different parts of Australia. The database should enable the public, builders, developers, insurers, government planners and policymakers to get granular and accessible climate risk information.

Households need comprehensive information

Climate risk information is a key determinant of households' adaptive capacity (Chapagain et al. 2025, pp. 4–6; Elrick-Barr et al. 2017, p. 1146). Information enables households to assess the potential impact of climate change on their assets and lifestyles. With a clearer assessment of the costs and likelihood of climate hazards, households can make better decisions about how to best address hazards (Chapagain et al. 2025, p. 7), for example by investing in resilience measures or relocating.

The availability of better information on climate risk can improve the efficiency and equity of housing markets over the long term. There is evidence that awareness of climate risk can be built into property prices (Beltrán et al. 2018, p. 676; Doupe et al. 2019, p. 112; Hino and Burke 2020, p. 11; Keys and Mulder 2020). This can be concerning to current homeowners. However, delayed access to climate risk information entails a trade-off between current and future homeowners, who may overpay for property. Access to accurate information on risk exposure and mitigation options enables informed adaptation decisions, such as managing risks to property or determining when relocation is appropriate.

Notwithstanding work under way by governments, including the work of the Australian Climate Service (ACS), the available information is inadequate.

- Many flood studies are not publicly available (Standing Committee on Economics 2024, pp. 203–204). This is a problem because floods are one of the most costly and fastest-growing climate hazards (ICA 2025, p. 12), and floods rank highly among natural disasters when people are deciding where to live (Vij et al. 2022, p. 49), yet many flood studies are not publicly available (Standing Committee on Economics 2024, pp. 203–204).
- The spatial granularity of available information is often limited. Multi-hazard data tends to be published at a regional level. Presentation of data for 11 major regions in New South Wales and the Australian Capital Territory (NSW Government 2025a) limits the ability to identify local climate risk. The ACS provides information at the local government area level, but only for heat and fire hazards (ACS 2024), and the quality of local government flood modelling and flood risk maps varies depending on council resourcing and expertise (ALGA, sub. 5, p. 3; Standing Committee on Economics 2024, pp. 200–203).
- Australia's climate information ecosystem is fragmented (O'Kane et al. 2024, p. 60). This fragmentation can make it difficult for users to find relevant data and means there is no 'national picture'.
- Sometimes information is simply difficult to understand (Standing Committee on Economics 2024, pp. 208–209). It can also be held in complex access environments that hamper use (Standing Committee on Economics 2024, p. 201).
- Older datasets rarely contain projections of evolving climate risk (ICA 2022, p. 8), which is crucial information for long-term investments in housing.

Several inquiry participants noted the importance of accessible household-level information on climate risks (Actuaries Institute, qr. 83, p. 3; CPA Australia, qr. 59, p. 3; Financial Rights Legal Centre, qr. 47, p. 3; GBCA, sub. 37, pp. 5-7; ICA, qr. 11, p. 4). Available information was described as inadequate (ICA, qr. 11, pp. 3-4; RBC, qr. 88, p. 4), and both 'difficult to find' and 'difficult to understand' (Financial Rights Legal Centre, qr. 47, p. 2).

Create a database of climate hazards

Better climate information would be comprehensive, consistent and relevant, and geographically tailored to locations and users. Having a 'go-to' source would engender trust, lower barriers to effective decision-making and would likely reduce the cost of meeting Australians' climate information needs.

These features are best achieved through a national-level database. Information available from the ACS is a good foundation and could provide a platform for open data with multi-hazard coverage, however another government body could host the database.

The database should be tailored to meet user needs by including historical information and projections regarding multiple climate hazards, as well as information on risk mitigation measures like flood and coastal inundation prevention infrastructure. (None of these suggestions seek to pre-empt the user-needs assessment that the ACS is undertaking).

Where this data exists but is fragmented across disparate sources, public and private, it should be collated into an accessible central source.

All would benefit from this data resource – households, businesses and governments.

Any effort to improve climate risk information must also make sure that users can understand it (O'Kane et al. 2024, p. 38; Styger et al. 2025, p. 18). As the independent review of the ACS stressed, 'A user-oriented approach to climate services is essential' (O'Kane et al. 2024, pp. 46, 50). Climate risk projections are complex and incorporate uncertainty – merely increasing the breadth and availability of the data will not effectively inform users. The most effective approach to making information accessible will depend on the user. Households may benefit from narratives explaining concrete consequences for homes and communities affected by hazards (Weber 2006, pp. 110, 116). Businesses can be assisted by combining hazard probabilities with explanations of plausible disaster outcomes on assets, alongside historical examples (Fiedler et al. 2024, pp. 8–16).

Access to high-quality data would assist the private sector to develop and tailor resilience-oriented products. Paywalls for detailed climate risk data are a barrier to innovation. Open-access data could allow smaller and new financial firms to offer innovative financial instruments and products to fund local adaptation. One example is parametric insurance, in which insurers pay out when pre-specified thresholds in publicly available measures of environmental conditions such as rainfall, windspeed or temperature are reached. Such products can reduce the negotiation and administrative costs of claims, reducing the costs of premiums in high risk areas (Chow et al. 2023, p. 12).

Some information under development could be folded into the centralised database. The Hazards Insurance Partnership (HIP) is developing a risk assessment and premium pricing (and insurance availability) dataset. Providing insurance customers' privacy was protected, some of this data could be incorporated into the public climate risk information database, connecting climate risk to insurance outcomes. The information could inform communities and households of the insurance implications of their climate risk exposure and help households to make decisions.

Develop information on homes' resilience

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

The Australian Government should lead development of a nationally consistent climate resilience star rating system for housing.

- The rating system should be outcome-based, with ratings reflecting potential damages from climate hazards. Ratings should account for location-specific climate hazards and the characteristics of a property.
- The rating system should be complemented by supporting material so that households, builders and insurers can easily identify upgrades that would improve a property's resilience.
- Development of the rating system and supporting material should build on work undertaken in this area and learn lessons from the development of the world-leading Nationwide House Energy Rating Scheme (NatHERS).

Homeowners need information on dwellings' resilience

Homebuyers can find it challenging to inform themselves about a property's resilience to climate hazards. Publicly available information is difficult for some users to understand (Choice 2023, p. 22; Styger et al. 2025, p. 18), contributing to only 29% of homeowners being aware of their home's risk of being impacted by a natural disaster (Domain 2024). A lack of climate risk information also limits the ability of homebuyers and sellers to assess the features that would protect a home. Where sellers are privy to more information about the resilience of a home than prospective buyers, it can lead to overpayment by buyers for non-resilient housing. This reduces the incentive for sellers to invest in resilience.

Homeowners can also struggle to work out how to best mitigate climate risks. Trading off the costs of investing in resilience today against potential future benefits is challenging. The future of global emissions and climate is uncertain, and climate change will happen over decades and may involve 'tipping points' or non-linear effects. These complexities can delay or prevent effective investment in resilience upgrades, and favour short-term coping strategies such as seeking cooler public spaces during heatwaves or securing loose items ahead of storms (Elrick-Barr 2016, p. 182).

Several inquiry participants have emphasised the benefit of a rating system that represents the resilience of a property (Actuaries Institute, qr. 83, p. 5; Cbus Super, qr. 19, p. 2-3; Financial Rights Legal Centre, qr. 47, p. 4; GBCA, sub. 37, p. 6; ICA, qr. 11, pp. 3-4). A rating system would allow people to make more informed decisions about where they live. Buyers could avoid less resilient homes, creating a price premium for more resilient housing. Sellers and developers would have an incentive to both establish and advertise a property's resilience.

Create a resilience star rating system

The Australian government should lead the development of a star rating system for homes' climate resilience. The rating should reflect resilience to multiple climate risks, accounting for present and projected weather, topography and local hazards.

The rating system should be based on outcomes – specifically, the potential cost of damages from climate hazards. This is distinct from prescriptive approaches, which confer ratings based on the use of specific

inputs or methods. The certainty that prescriptive approaches provide can be a benefit (PC 2025b, p. 49). But the freedom to innovate and adopt new inputs or methods under an outcome-based approach would be valuable in the context of climate change, where risks, our understanding of them, and our understanding of how to mitigate them are all evolving. NatHERS, an outcome-based rating system, has been reported to lead to innovative design methods that achieve both higher ratings and cheaper construction costs (CSIRO 2013, pp. 68–69).

A rating system could provide a basis for insurance pricing that incentivises resilience investment. Currently, insurance pricing does little to inform homeowners' investments in resilience, with several participants stating that resilience improvements made by households are not fully reflected in reduced premiums (HIA, sub. 31, p. 16; Master Builders Australia, sub. 33, p. 26). One exception is the discounts facilitated by the Resilient Building Council's (RBC) bushfire resilience self-assessment app (ICA 2025, p. 11). The app details actions to improve a dwelling's bushfire resilience rating that are recognised by insurers through premium discounts. Within the app's first six months of operation, 6,600 households had implemented at least four recommended actions, resulting in $44 million worth of bushfire resilience improvements (RBC 2024a). The RBC model provides proof of concept for how price signals and information on what works can drive private investment in resilience.

A rigorous rating needs to be based on how specific properties perform in their environment and translate into the risk to assets for households. This means considering the location-specific climate hazards facing each home and how their construction deals with those hazards. Just as temperature, weather and location conditions alone do not dictate a house's Nationwide House Energy Rating Scheme (NatHERS)[19] energy efficiency star rating, each building's specific features need to be considered when assessing how they perform from a resilience perspective. The RBC's bushfire resilience rating system considers features such as the distance of a house from bush, the presence of combustible insulation, roof size and the potential fire paths into a house such as ventilation openings and windows (Engineers Australia 2022, pp. 95–98).

Homeowners do not have access to salient information on how their property's exposure to climate risks will change over time – the resilience rating system would fill that gap. For many households, insurance premiums are the most tangible signal of their exposure to climate risk. But current premiums do not reflect how climate risks will change over time, which is highly valuable information for people making long-lived investments in housing. The risk rating system should draw on authoritative climate projections (draft recommendation 3.1) and include information on likely future exposure.

Development of a multi-hazards rating system should be informed by widespread collaboration. Consulting with experts would help ensure the rating system works for builders, developers and households and accurately reflects potential damages from climate hazards. Bodies like the RBC, builders, developers, households and other experts should be consulted on the methods and technology used to assess the resilience of housing.

A single, trusted and nationally consistent resilience rating system would provide certainty and consistency across assessments. The rating system should also aim to learn from progress to date. Several bodies have designed resilience assessment approaches for buildings. The RBC, supported by funding from the NSW Government and the National Emergency Management Agency (NEMA), has begun to develop a multi-hazards resilience rating system which uses assessors instead of a self-assessment app (RBC 2025). The Green Building Council of Australia's Green Star building rating system considers multiple features such as

[19] The Nationwide House Energy Rating Scheme (NatHERS) measures the energy efficiency of Australian homes. It provides a star rating out of 10, which reflects the home's thermal performance and helps inform energy-conscious design.

energy efficiency, water use and resilience, providing an example of how to incorporate various aspects into a single composite rating. And XDI and Climate Valuation offer household-level climate risk reports.

Continued updating of the rating system informed by scrutiny would strengthen the accuracy of ratings. NatHERS was improved by multiple studies critiquing its methodology in the early years of development (Williamson 2000, pp. 105–108), and is now used in the National Construction Code (NCC). One critique, for example, focussed on its applicability in humid locations outside the climate zones where it was initially developed (Tony Issacs Consulting 2017). Given that climate resilience must draw on highly localised information about a range of hazards, it will be important to evaluate the accuracy of resilience ratings in a variety of areas and climate zones.

The highest policy priority in establishing a resilience rating system is to lift the low levels of resilience in existing housing. New houses are more resilient to climate hazards than those built prior to existing building standards (ABCB 2014, p. 15). Accordingly, the Productivity Commission is not suggesting changes to the NCC, though the body that designs the code now has to consider buildings' resilience as an objective (box 1.1).

Box 3.1 – Resilience related changes to the NCC must demonstrate high benefits that exceed costs

The PC has previously argued that while the NCC is sound in principle, aspects of the code and how it is implemented impose unnecessarily high costs on building construction (PC 2025b, p. 5). The PC recommended an independent review covering the NCC's effectiveness against its aims and objectives, its governance arrangements and membership, and how states and territories are implementing it (PC 2025b, p. 54).

Past changes to the NCC after natural disasters and the adoption of high energy efficiency standards have already improved new buildings' resilience to climate hazards. Newer buildings tend to perform much better than older ones (ABCB 2014, pp. 8, 15). Improved building standards have been found to reduce annual average cyclone-related losses by nearly two-thirds (McAneney et al. 2007).

Building Ministers decided to make climate resilience an objective for the Australian Building Codes Board (ABCB) from 1 July 2025 (ABCB 2024). This will enable the ABCB to explore options for cost-effective building standards which increase property resilience. Prevention of water ingress from wind-driven rain in cyclone-prone areas could be an example (CIE 2023, pp. 4, 53–54).

As with any change to the NCC, resilience-related changes would need to be of net benefit to society.

Access to an outcomes-based rating system could support this objective. An outcome-based standard, anchored to the cost of damages from climate hazards, would provide information on the potential benefits over time of changes that could be weighed directly against any additional construction and compliance costs. Any changes to the NCC relating to resilience would need to carefully consider potential overlap with existing aspects of the code, including how existing energy efficiency requirements already make buildings more resilient to heat (Climate Council 2022, pp. 4–5).

The ABCB will face challenges in deciding how the NCC should support resilience:

- Changes to the NCC need to create a net benefit to society and should not be implemented if superior alternatives are available (Commonwealth of Australia, state and territory

Box 3.1 – Resilience related changes to the NCC must demonstrate high benefits that exceed costs

governments 2020, p. 12). In some areas there may already have been over-investment in adaptation (for example, requirements for interconnected fire alarms were introduced despite an assessment that this would have net costs (ABCB 2013, p. 10)).

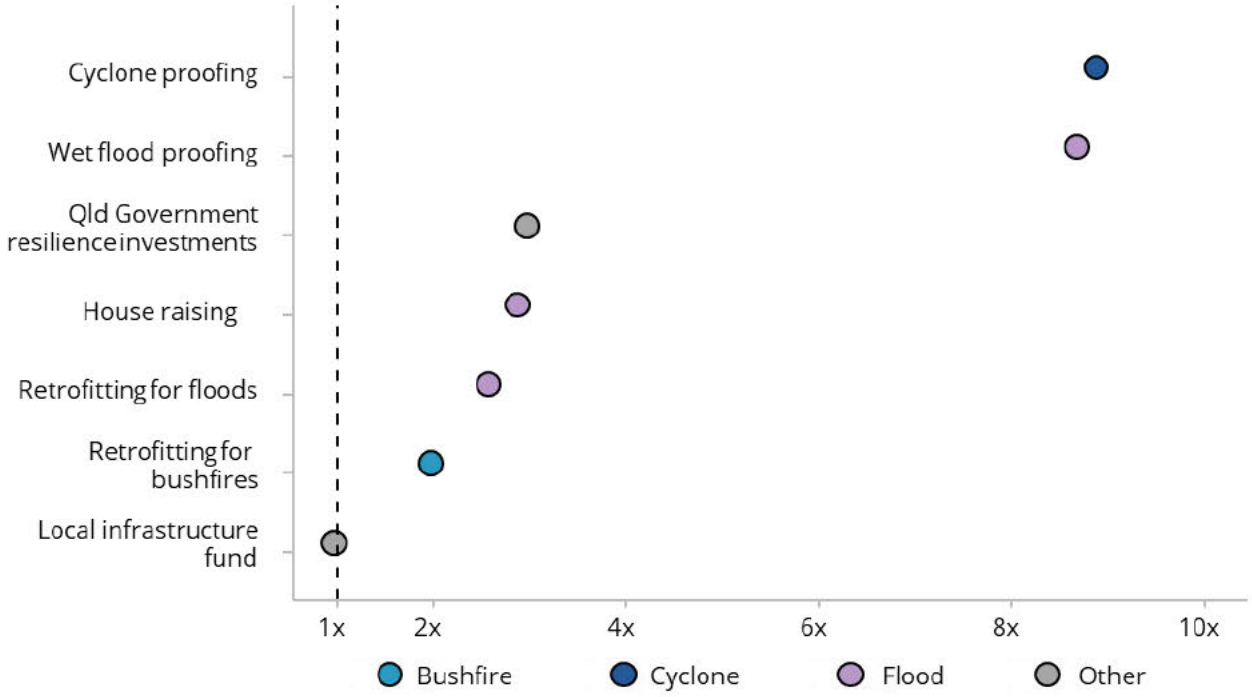
- The NCC's three-yearly review cycle means that standards could be updated as climate projections evolve but 'shifting the goal posts' has costs. It can deter innovation because industry will be reluctant to make investments that are likely to quickly become outdated. The PC has recently drawn attention to these trade-offs (PC 2025b, p. 50).

Provide guidance on cost-effective resilience investments

The Australian Government should also lead the development of information about cost-effective ways to lift resilience so that households, developers, builders and insurers can easily identify building features that help housing be climate resilient. Resilient building features can include products such as solid core external doors to withstand cyclones (Queensland Government 2025a, pp. 1–2), wet-proofing of areas at risk of inundation from flood (RBC 2024b, p. 6) or non-combustible roofing frames to protect from bushfire (CSIRO 2021). These measures can yield high returns (figure 3.2).

Figure 3.2 – Resilience investments in housing yield high returns[a]

Estimates of benefit–cost ratios for different resilience programs



Sources: cyclone proofing, wet flood-proofing and local infrastructure fund – Finity Consulting (2022, pp. 5–6); Queensland resilience investments – Resilience Valuation Initiative (2023, p. 3); house raising and retrofitting for floods – Queensland Reconstruction Authority (2019, pp. 120–121); retrofitting for bushfires – US National Institute of Building Sciences (2019, p. 2).

Pairing the resilience star rating system with guidance about property upgrades that increase resilience in specific locations would make households, developers and builders feel more confident that their investment will produce an effective return. Increases in a home's resilience rating post-investment could reduce insurance premiums, offering a homeowner an immediate and tangible incentive to invest in resilience. Inquiry participants have highlighted how providing guidance on adaptation measures to reduce risk can be effective at prompting investment in resilience features (Actuaries Institute, qr. 83 pp. 24; Foundation for Rural & Regional Renewal, qr. 21, p. 3; GBCA, sub. 37, p. 7; MFAA, qr. 75, p. 2; Wimmera Southern Mallee Development, qr. 30, p. 9–10).

Guidance should identify actions to address multiple hazards and provide sufficient certainty to builders and insurers to recommend these actions to consumers. The Housing Industry Association (HIA) has supported central guidelines for resilience features, stating that there should be a 'single source of truth for relevant guidelines, tools, etc. for measures home owners and builders can use to make homes more resilient to natural hazards …' (HIA 2023).

As with a resilience rating system, guidance on resilience features should be forward looking and draw on widespread collaboration. Projected changes in climate risk, and engagement with the ABCB, insurers, local councils, builders and developers, should inform its development. And the guidance should be regularly reviewed to reflect developments in climate knowledge and building technologies, and to assess its value to households, builders and insurers.

Development of guidance on the investments that can improve buildings' resilience ratings will not need to start from scratch. Various insurers and governments already provide information on how to improve resilience. For example, NEMA, through the work of HIP, maintains a National Resilience Action Library that suggests building actions based on climate hazards and climate zones. However, there is, in general, a lack of information about the investments that will have the biggest net benefits for households – something the ratings system and complementary guidance could address.

The Australian Sustainable Finance Institute has suggested expanding Australia's sustainable finance taxonomy[20] to include adaptation (ASFI, sub. 20, p. 6). This could further support efforts to incentivise resilience by lowering the cost of household financing. Even after being provided with a resilience rating and guidance on how to improve it, households may still be reluctant to act because of high upfront costs (Actuaries Institute, qr. 83, p. 2; Cbus Super, qr. 19, p. 2). An expanded taxonomy could help to direct capital flows towards these investments and enable financial institutions to develop and scale green loans and other discounted loan products, reducing the upfront costs of household investment in resilience.

[20] The sustainable finance taxonomy is a framework defining economic activities that are sustainable for the environment and community. In Australia, it is being developed by the Australian Sustainable Finance Institute to guide investors, companies, and regulators in identifying financial products that align with national climate and sustainability goals.

Information request 3.1

Developing a national resilience rating system will involve several design and implementation choices.

- What should be the role of self- versus third-party assessment? What are the potential costs of different assessment approaches? And how might the choice of approach impact the information gathered?
- How can the rating system be developed to ensure a property's resilience is reflected in insurance premiums? For example, what type of information should be used to calculate ratings; how should that information be collected (self- versus third-party assessment); and how should insurers be involved in development of the system?
- What entity or entities should take the lead in developing supporting material on upgrades that would improve properties' resilience?
- What governance arrangements should be in place for both development of the rating system and supporting material?

How do you foresee that the rating system might be used by households and other parties, including regulators, local government and builders?

Address other barriers to investment

Draft recommendation 3.3
Governments should agree on a series of actions to improve housing resilience over time

The Australian Government should lead work with the states, territories and local governments to agree on a series of actions that will improve the resilience of our housing stock over the coming decades. Older housing in high-risk areas will need the greatest focus.

a. This work should be anchored around time-specific and outcome-based goals for household-level resilience, taking into account climate damages and the effects of heat. The goals will form the basis for a shared understanding of how agreed actions will improve resilience.
b. Actions should only be taken where benefits exceed costs based on high quality impact assessments. They should be staged in line with the expected pace of climate change and coordinated with public investment to achieve measurable improvements in precinct resilience.

Governments need to take considered and coordinated action

A climate risk database, a resilience rating system and guidance on cost-effective resilience upgrades are building blocks for improving housing resilience but will not be enough.

Even with those building blocks in place, other barriers impede investment in resilience. Households need information about climate change risk to be salient at key decision points – when they are selling or leasing a dwelling, for example. Decisions on where to build are constrained or influenced by government planning

and zoning decisions. And some taxes distort insurance pricing, discouraging uptake.[21] Even if investments in resilience are cost-effective, households may not adopt them if they will not experience all the benefits. And households will find it difficult to prioritise short-term spending to address changes in climate risk, while many households will be constrained by financial capacity.

These issues engage the interests of all levels of government and will require coordinated responses. Governments at all levels need to work together to support effective and efficient adaptation in housing. State, territory and local governments have the most direct interest in adaptation policy given many of the benefits and costs are experienced locally, and actions involve place-based approaches. But the Australian Government has an interest in coordinating and enabling adaptation given national productivity and resilience goals and its significant role in resourcing disaster recovery. The Property Council of Australia noted that effective adaptation would require policy at different levels of government and could be usefully coordinated under a nationally cohesive strategy (PCA, qr. 84, p. 7).

Effective intergovernmental coordination, led by the Australian Government, would minimise the costs of achieving a climate-resilient housing stock. Agreed goals for housing resilience would enable development of a pathway for policy action. Clear and aligned roles and responsibilities would avoid gaps or overlaps in policy efforts. Accountability measures would keep governments on track. And early signalling by governments of the importance of adaptation can enhance efficient private investment in resilience and reduce policy costs over time.

Adaptation at scale will need sustained effort over time and governments need to carefully consider further policy options and their phasing. Increasing investment in resilience may require significant policy change, so governments will need to consider when and how to phase in different measures and how to sequence them. Some policies, for example, can only be implemented after the resilience rating system has been created and tested. Choosing policy options will take time, particularly as the information required to evaluate the costs and benefits of potential policy responses may not yet be available. Laying the groundwork now will reduce costs and increase the chances of adaptation being as effective as possible.

An agreed set of actions to drive investment in housing resilience

Australian governments should therefore coordinate and agree a set of actions that will deliver sustained investment in housing resilience. This work should be anchored around time-specific and outcome-based goals for housing resilience and identify cost-effective measures to achieve those goals. They could be framed in terms of a substantial proportion of homes meeting a minimum resilience rating and level of heat resistance within fifteen years. Governments should regularly review progress against the goals through monitoring, evaluation and learning processes for adaptation policy (draft recommendation 3.4).

Governments should focus on three priorities regarding investment at household level in resilience:

- improve households' capacity to easily understand and use climate risk information
- facilitate resilience retrofits of the existing housing stock
- embed climate risk in planning and zoning decisions.

In each area, the aim will be to influence the investment decisions of the millions of buyers and sellers who make up Australia's housing market. Inquiry participants argued that embedding resilience in specific

[21] As the PC has previously observed, the Cyclone Reinsurance Pool may also distort insurance pricing and reduce incentives for households to manage natural disaster risks (PC 2023c, p. 6, 2024b, p. 8). Some inquiry participants disagree, with HIA supporting Government-backed reinsurance pools as a method to maintain insurance affordability in high-risk areas (HIA, sub. 31, p. 17).

interventions to address housing resilience and sector-specific plans can increase private investment in adaptation (ACTU, sub. 32, p. 14) and contribute to a shared understanding of the value of adaptation (IGCC 2024, p. 28). When working together to choose actions that will facilitate private investment, governments should consider ways to embed the climate risk information database (draft recommendation 3.1) and the resilience rating system (draft recommendation 3.2) into decision-making.

Governments should choose measures to achieve goals based on clear identification of the case for government versus householder action and their cost-effectiveness. Analysis of the benefits and costs of different policy options would be needed to avoid adding unnecessary costs and regulatory burden on construction. Ensuring adherence to rigorous Impact Assessment processes would help in this regard (PC 2025a).

Beyond actions targeting investment at the household level, governments will also need a framework for targeted investments in local infrastructure to improve precinct-level resilience. Such a framework should outline how governments will coordinate public and private investment and consider interdependencies between housing and adaptation in other systems. For example, in some areas, efficiently improving housing resilience may require adapting the local environment or hardening public infrastructure. The level of targeted investments should be guided by the goals for housing resilience.

Agreeing on goals for housing resilience and an initial series of actions should be a near-term priority. Governments will need to act over the long term and adjust in response to further information. Some actions can be phased in over time and adjusted based on lessons learned. And some will take time to implement because they will need to build on other reforms. For example, measures to support resilience rating disclosure should be implemented once the rating system is comprehensive and robust, and market responses observed.

Support household use of information

Even when household-level climate risk is known, and clear information available, households may struggle to apply this information. Many will have limited capacity to navigate the uncertainty and other complexities inherent in climate risk data. And without action, information describing the property's condition could be hard to access.

Providing clear, salient information at key decision-making points would change the behaviour of both buyers and sellers for the better. Buyers aware of climate risk could make more informed decisions. Research shows that buyers value climate resilience, and will pay premiums for resilient housing when they are aware of climate risk (Niu et al. 2025, pp. 7–9).

To support households' capacity to understand and use climate information, governments could identify mechanisms to:

- increase awareness and understanding of climate risk, such as by ensuring that relevant information and training is available on online portals to real estate agents, mortgage brokers and tradespeople so that they can disseminate information about climate risk and resilience upgrades to customers
- support resilience ratings disclosure, such as by ensuring training is available for rating assessors
- promote disclosure of resilience ratings, such as by making it mandatory at point-of-lease and point-of-sale in high-risk locations.

Experience developing related policies suggests that disclosure requirements would take some time to settle. NatHERS and the Trajectory for Low Energy Buildings – a process to lift energy efficiency, reduce emissions and move towards energy efficiency disclosure – has been developed over thirty years. And it will be costly for governments to administer the scheme and homeowners to provide information for a resilience

app or commission resilience assessments. Analysis as part of the Trajectory for Low Energy Buildings suggests that mandatory disclosure of energy efficiency ratings would yield a net benefit, but costs would be in the billions of dollars (Common Capital 2024, p. 13). If governments consider implementing resilience rating disclosure requirements, they will need to conduct similarly thorough cost-benefit analysis and identify appropriate ways to phase in requirements.

The PC has previously recommended that governments require vendors to disclose the physical climate hazards faced by a property to decrease information asymmetry between sellers (or landlords) and buyers (or renters) (PC 2023c, p. 8). Mandatory disclosure could also make it easier for investors to get a return on resilience investments, as properties with higher ratings could attract a premium. The Actuaries Institute argued that it 'would help to inform and empower both buyers and sellers, driving market-based solutions' (Actuaries Institute, qr. 83, p. 4).Several other inquiry participants raised the benefits of transparently communicating climate risks via mandatory disclosure (Cbus Super, qr. 19, p. 3; Financial Rights Legal Centre, qr. 47, p. 3; MFAA, qr. 75, p. 3; RBC, qr. 88, p. 2). Nevertheless, any decision to implement mandatory disclosure will require a careful assessment of the costs and benefits.

Address resilience of the existing housing stock

Even if information about climate risk becomes more salient, a range of other barriers will likely prevent housing resilience goals from being met. Without more targeted action, many existing dwellings will be exposed to increasing climate risk for decades to come. For example, most Australian homes were built before the code included basic elements to protect against common weather events and minimum energy efficiency requirements and most of these houses will still be used in 2050 (Climateworks Centre 2023, p. 9).

The extent of potential exposure is vast. It is estimated that around 15% of properties already face moderate to high climate risk (excluding heat), according to one estimate (Climate Council and Climate Valuation 2025, p. i). And households are vulnerable to heatwaves – 85% of dwellings assessed under the 2019 Victorian Residential Efficiency Scorecard had the worst possible thermal rating during hot weather. The Housing Industry Association has argued that the existing housing stock is more vulnerable to climate change than new housing and will require different policies to improve resilience (Housing Industry Association, sub. 31, p. 14).

To build resilience of the existing stock, governments could identify mechanisms to:

- increase finance for retrofitting homes, such as by subsidising resilience upgrades for vulnerable households in high-risk areas (as has occurred through the Resilient Homes Funds in New South Wales and Queensland)
- support households to build back to a higher standard of resilience after a natural disaster, such as through increased flexibility around like-for-like rebuild rules for insurance claims
- improve the resilience of social housing, such as by committing to meet minimum resilience ratings
- address barriers to landlord investment, such as by implementing minimum standards for rental housing in high-risk areas (as has occurred through minimum energy efficiency requirements in the Australian Capital Territory and Victoria, which impact resilience (ACT Government 2025; Vic DEECA 2025)).

Several inquiry participants argued that minimum standards combined with financial support, such as concessional finance, would be necessary to build resilience of the existing housing stock. Participants highlighted that these policy approaches would support low-income households, renters or both, helping those who cannot afford voluntary resilience upgrades to access climate-resilient housing (ACOSS, sub. 24, pp. 8–9; Actuaries Institute, qr. 83, pp. 2, 4; ASBEC qr. 44, p. 5; GBCA, sub. 37, p. 8; RBC, qr. 88, pp. 2, 4).

Minimum resilience rating standards for rental housing may be warranted because there are steeper barriers to investing in climate resilience. It is difficult for landlords and renters to negotiate who covers the costs of

investment (PC 2005, p. 105, 2012, p. 215). However, many renters also face housing stress, making them particularly sensitive to increases in the cost of housing (SCRGSP 2024, pp. 3–4).

Any regulatory measures should pass a cost–benefit assessment. Minimum resilience rating standards for rental housing would impose significant compliance costs and need to be developed with care. If minimum requirements are considered necessary, provision of adequate advance notice and lead time to adjust will be essential.

Continue developing planning principles

Where we live directly impacts our exposure to climate hazards. Differences in climate risk contribute to median home insurance premiums in southern Australia being roughly half those in the cyclone-prone north (ACCC 2024, p. 8). In areas exposed to major flood risk, premiums can exceed $30,000 a year (ICA 2025, p. 6).

People can and do make decisions about where to live based on climate, but their decisions are constrained or influenced by government planning and zoning decisions and investment in public infrastructure. Inquiry participants have noted that planning systems do not sufficiently account for future climate change scenarios (ICA, qr. 11, p. 3; IGCC, qr. 33, p. 6–7). With Australia's population projected to increase by approximately 10 million people by mid-century (Australian Government Centre for Population 2024, pp. 1–2), it is imperative that land use planning systems consider climate risk.

Governments will need to change planning systems to meet national goals for household resilience. State, territory and local governments control the levers for change, but taxpayers as a whole can bear the burden of poor planning through, for example, the cost of disaster response and recovery. Payments to states and territories for natural disaster response and recovery alone are projected to reach a cumulative $130 billion over the 40 years to 2063 (Treasury 2023, p. 107).

It is encouraging that planning Ministers have agreed that New South Wales will lead development of a framework and guidance on nationally agreed principles for natural disaster and climate risk considerations in land use planning decisions (Planning Ministers 2023). As noted by the Green Building Council Australia, such principles to embed climate risk would help protect wellbeing and reduce public costs (GBCA, sub. 37, p. 8). Governments should commit to implementing these principles so that land use planning does not unnecessarily increase Australians' exposure to climate hazards.

3.2 Accountability measures keep policy action on track



Draft recommendation 3.4
Give the Climate Change Authority responsibility for monitoring, evaluation and learning regarding adaptation policy

The Australian Government should legislate for the Climate Change Authority to take responsibility for monitoring, evaluating and learning to inform governments and the public about progress in adapting to climate change, and whether policies are effective. Progress reports should be published every two years and include recommendations about how to improve adaptation policy.

Improve monitoring, evaluation and learning

Accountability measures will be important in helping keep governments on track to meet national goals for housing resilience, and adaptation policy more broadly would benefit from additional scrutiny. Accountability mechanisms – such as monitoring, evaluation and learning – will help identify and implement the most effective ways to adapt to climate change.

Monitoring, evaluation and learning are fundamental to good policymaking (PC 2020a, p. 4, 2023e, p. 51). Both the *National adaptation plan issues paper* and its predecessor, the *National climate resilience and adaptation strategy 2021-25*, recognise that these processes 'improve the effectiveness and efficiency of policies and increase accountability for risks and adaptation commitments' (DAWE 2021, p. 35; DCCEEW 2024b, p. 10).

In 2012, Australian, state and territory and local governments agreed to jointly establish and implement monitoring and learning for adaptation policy, as well as reporting for climate change impacts (COAG 2012, p. 6), but these processes have not yet been fully implemented. Governments are developing or intend to develop mechanisms for these processes, and all states and territories have some public reporting on policy delivery in place. Yet no state or territory jurisdiction nor the Australian government is comprehensively publicly monitoring or evaluating adaptation policies against measures of climate resilience (for example, the proportion of residential houses that overheat during heatwaves, the number of weather-related mortalities, the incidence and types of morbidity from heat stress and coverage of early warning systems for natural disasters).

Without monitoring, evaluation and learning, governments lack the information they need to prioritise and manage climate risk (Colvin et al. 2024, p. 71). At present, the impacts of adaptation policies and potentially maladaptive measures, such as rebuilding in high-risk zones after a disaster, are unclear. And budgets do not currently include realistic estimates of future natural disaster costs – the Centre for Policy Development estimated that on average, the Australian Government spends $1.6 billion each year on disaster recovery but budgets for just $215 million (Phillips et al. 2025, p. 3). Governments need to know how effective their policies are to identify opportunities for improvement, set priorities among initiatives and adjust to changing circumstances.

Task the CCA with improving accountability

Several countries have systems for monitoring, evaluating and learning to improve adaptation policy over time. In the United Kingdom and New Zealand, an independent body undertakes these functions and reports publicly every two years (NZ Climate Change Commission 2020, 2025; UK Climate Change Committee 2023, 2025, p. 11). These reviews advise on whether current policies are adequate, recommend opportunities for improvement and provide consistent accountability. The Climate Change Authority (CCA) has recommended that it be given a legislated role to assess adaptation progress (CCA 2024a, p. 17), and the Australian Government has agreed to this recommendation in principle (DCCEEW 2024a, p. 59).

A national approach to monitoring, evaluation and learning would serve Australia well. It would be an efficient way to build understanding of current levels of climate resilience and help to prioritise policy. Information gathered could inform coordinated efforts to reduce risk and taxpayer exposure.

An effective national approach would include regular reviews. Appraisal of adaptation policies and progress against measures of climate resilience would aid the design of more effective policy, especially by state and territory governments, who control many levers, such as planning regimes, that impact climate resilience. Measuring climate resilience could help the Australian Government drive efficient investment in adaptation,

including through existing or new National Agreements. Public reporting of review findings would hold governments to account for adaptation policy.

Reviews should be undertaken by a body independent of government and with expertise in adaptation.

The CCA has these characteristics and performs similar functions for mitigation – meaning it has developed processes and procedures to support this type of work. Because it operates at arm's length from other government agencies developing and implementing adaptation policy, it can give transparent and independent advice. Indeed, the CCA's mandate to provide expert independent advice was a key reason why it was chosen to undertake reporting on progress achieving emissions reduction objectives (DPS 2022, p. 14).

The CCA should be tasked with delivering reviews of progress against a national framework for measuring climate resilience. As part of the reviews, the CCA should assess the adequacy and effectiveness of Australian Government policies (including any announced under the forthcoming National Adaptation Plan), recommend policy improvements and report on state and territory adaptation policies.

The CCA will need to be appropriately resourced. While it can draw from some international and Australian examples of monitoring, evaluation and learning for adaptation, the space is not mature, and it would need additional resourcing to deliver its expanded mandate.

We suggest the Australian Government legislate that reviews of adaptation progress occur every two years. This frequency would help maintain momentum while giving time for policies to have a material effect on outcomes. (The United Kingdom and New Zealand conduct reviews on this timeframe.) Legislating the reviews may give them more longevity and send a strong signal that the Australian Government is prioritising adaptation policy. This could provide more certainty to decision-makers and increase state and territory government buy-in. Successive National Adaptation Plans do not necessarily need to match this frequency, and it may be appropriate for adaptation plans to be renewed less frequently, to give more time for policy to be delivered and evaluated between each plan.

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