Australian Government
Productivity Commission

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Investing in cheaper, cleaner energy and the net zero transformation

What we heard

Inquiry paper

December 2025

Acknowledgement of Country

The Productivity Commission acknowledges the Traditional Owners of Country throughout Australia and their continuing connection to land, waters and community. We pay our respects to their Cultures, Country and Elders past and present.

About us

The Productivity Commission (PC) is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long-term interest of the Australian community.

The PC's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

For more information, visit the PC's website: www.pc.gov.au

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Introduction

In December 2024, the Australian Government tasked the Productivity Commission with undertaking five inquiries aimed at identifying priority reforms and developing practical, implementable recommendations to boost Australia's productivity growth.

As part of the terms of reference, the PC was asked to engage widely and consult appropriately, including by inviting public submissions.

For this inquiry into *Investing in cheaper, cleaner energy and the net zero transformation*, we sought to identify: potential improvements to greenhouse gas emissions policy; ways to address regulatory impediments to the construction of energy infrastructure; and how governments might most effectively support adaptation to climate-related hazards.

We focused on three priority reform areas:

- reducing the cost of meeting emissions targets
- speeding up approvals for new energy infrastructure
- addressing barriers to private investment in adaptation.

This what we heard paper summarises the perspectives of participants who engaged with the inquiry through an online questionnaire and written submissions – a summary of key statistics from the consultation process is provided in figure 1. It seeks to reflect the written feedback received, organised by key themes across the reform areas explored in the inquiry.

All questionnaire responses and submissions were read and considered by staff. AI tools were used in some cases to help identify themes and group perspectives from these responses. Staff reviewed all AI-generated outputs.

We thank participants and acknowledge the valuable contributions from individuals, companies, peak bodies, Aboriginal and Torres Strait Islander representatives, consultants, researchers and government agencies to this inquiry.

Figure 1 – Participation in consultation process

Questionnaire responses

91 Total questionnaire responses received

Responses received for each reform area

66 Reducing the cost of meeting emissions targets

52 Speeding up approvals for new energy infrastructure

35 Addressing barriers to private investment in adaptation

Submissions

283 Total submissions received

44 Pre-interim report submissions

239 Post-interim report submissions

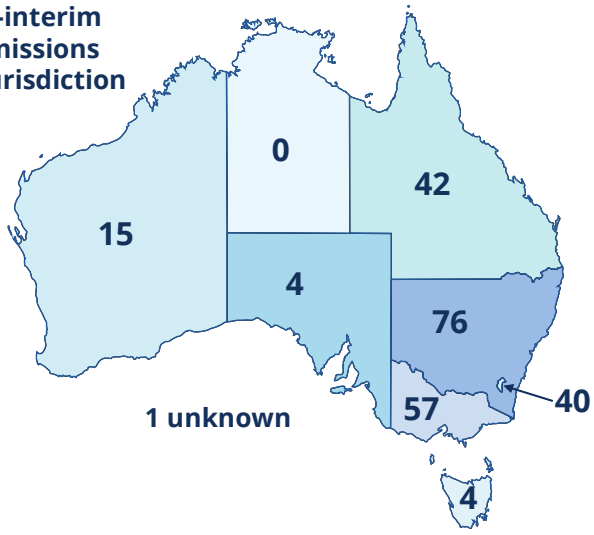
Post-interim submissions from

175 Organisations

64 Individuals

1 Aboriginal and Torres Strait Islander individuals/organisations

Post-interim submissions by jurisdiction



Other consultations

168 Meetings

Reducing the cost of meeting emissions targets

Governments should aim to reduce emissions at the lowest possible cost to households, businesses and taxpayers. 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. Yet not all sectors are covered by incentives, some policies provide inconsistent incentives and, in other cases, multiple incentives overlap.

Consultation focused on the cost-effectiveness of policies to reduce emissions. We identified four themes:

Emissions-reductions policy in the electricity sector after 2030
Policies supporting electricity sector decarbonisation do not run beyond 2030

Incentives to reduce emissions in heavy industry
Not all facilities in heavy industry face an incentive to reduce emissions

Incentives to reduce emissions in transport
Heavy vehicles lack incentives, some incentives for light vehicles are expensive

Design and assessment of cost-effective policies
Benchmarking can help identify the lowest-cost policies

Emissions-reductions policy in the electricity sector after 2030

There was strong support for introducing broad-based, technology-neutral market settings in the electricity sector. Submissions commonly emphasised that policy settings should ensure reliability and system security as well as emissions reductions.

Many submissions supported taking a technology-neutral approach to reducing emissions in the electricity sector – that is, an approach that aims to reduce emissions but does not have a bias toward or against different ways of reducing emissions. Several submissions highlighted Australia's ban on nuclear power as limiting technologically neutral ways of reducing emissions. For example, the Centre for Independent Studies (CIS) submitted that:

> The Productivity Commission should explicitly call for technology-neutrality in practice, which means lifting the legislative bans on nuclear energy. (CIS, sub. 152, p. 3)

Many submissions indicated support for jurisdictional neutrality, with some qualifications.

Examples of participants' views on market settings in the electricity sector and jurisdictional neutrality are below.

There was broad support for broad-based market settings in the electricity sector that address emissions as well as reliability and system security

> ACCI supports the PC's recommendation that the Government prioritise introducing enduring, broad-based market settings in the electricity sector beyond 2030. We agree that the approach should remain technology neutral. (Australian Chamber of Commerce and Industry, sub. 197, p. 2)

> The AEC supports the overarching direction of the Interim Report to establish enduring, broad-based market settings in the electricity sector. (Australian Energy Council, sub. 156, p. 1)

> AGL supports the PC's recommendation that the government consider the need for enduring, broad-based market settings for the electricity sector beyond 2030. We also agree that these market settings should avoid favouring specific technologies or jurisdictions and simultaneously support reliability and system security. (AGL Energy Limited, sub. 231, p. 5)

> AIGN supports nationally consistent, technology-neutral incentives to deliver least-cost emissions reductions while maintaining system reliability and security. Incentives should encompass renewable energy, firming and shaping services, and emerging low-carbon fuels. Reforms to the National Electricity Market should be aligned with broader energy system reforms to ensure a coordinated transition. (Australian Industry Greenhouse Network, sub. 220, p. 2)

> We strongly support the call for nationally consistent, technology-neutral incentives in the electricity sector beyond 2030. (Ascera Energy, sub. 176, p. 2)

> Jemena supports prioritising long-term, broad-based market reforms in the electricity sector beyond 2030. (Jemena, sub. 223, p. 3)

Jurisdictional neutrality was widely supported …

> We agree that jurisdictional- and technology-specific incentives are inefficient and should be phased out in the long-term interests of energy customers. (AGL Energy Limited, sub. 231, p. 4)

> The phasing out of jurisdictional and technology-specific incentives is consistent with AIGN's emphasis on reducing complexity, promoting efficiency, and ensuring a level playing field for all technologies and investors. (Australian Industry Greenhouse Network, sub. 220, pp. 3–4)

> Ascera's experience demonstrates that fragmented state-based schemes distort investment decisions and increase costs for consumers. A stable, nationally coordinated framework is essential to drive scale investment in batteries and renewable energy zones. (Ascera Energy, sub. 176, pp. 2–3)

… with some qualifications

> Given that many of the actors in WA's electricity system are Government Trading Entities, and the unique characteristics of the state's grids, the WA government must retain the latitude to put in place measures to drive the expansion of a low-emission electricity system. Where possible, this should be in partnership with Commonwealth schemes that apply nationally. (Chamber of Minerals and Energy WA, sub. 170, pp. 4–5)

> While we agree with the Productivity Commission that jurisdiction and technology specific incentives should be phased out over time, we also recognise that significant infrastructure and public and private investment will be required to decarbonise the Pilbara mining industry and develop a globally competitive green iron industry using green hydrogen made with renewable energy. (Fortescue, sub. 216, p. 3)

Incentives to reduce emissions in heavy industry

Lowering the threshold for the Safeguard Mechanism

Many inquiry participants supported the draft recommendation to lower the Safeguard Mechanism threshold.

> AGL agree with the PC that the Australian Government should consider lowering the Safeguard Mechanism threshold as part of the [review of the Safeguard Mechanism scheduled for 2026-27]. (AGL Energy Limited, sub. 231, p. 4)

> We are supportive of the PC's recommendations to expand the scope of the Safeguard Mechanism and increase the integrity of carbon offsets recognised by the Safeguard Mechanism (SM). (Australian Council of Social Service, sub. 24, p. 6)

Some participants suggested that lowering the threshold would improve coverage of emissions reduction incentives.

> CMI supports draft recommendation 1.2 and sees expanding the Safeguard Mechanism to cover more facilities as an efficient way of harmonising policy and providing a consistent decarbonisation driver. (Carbon Market Institute, sub. 207, p. 4)

Some participants gave qualified support for the draft recommendation to lower the Safeguard Mechanism threshold if requirements on new facilities were phased in carefully.

> Broader coverage could provide more consistent incentives across the economy. However, lowering the threshold raises questions of effectiveness and materiality … Any change should be phased in gradually, with consultation and sufficient lead time, to preserve investment confidence and operational stability. (Australian Industry Greenhouse Network (AIGN), sub. 220, p. 4)

> While we support broadening coverage, lowering the threshold to 25,000 tCO_2-e risks capturing small facilities with limited abatement options. Therefore, we encourage a phased and sector-sensitive approach to avoid compliance burdens that could discourage industrial decarbonisation investments. (Ascera Energy, sub. 176, p. 3)

Other participants emphasised that lowering the threshold for the Safeguard Mechanism would increase regulatory burden for new facilities.

> It is not appropriate to say the Safeguard Mechanisms does not impose material administrative costs for participants … [The] current legislative framework gives rise to administrative burden in circumstances where there are joint-venture ownership structures, to the extent it largely only considers asset operators rather than owners (e.g. in terms of allocating liabilities). (Origin Energy, sub. 215, p. 3)

> There is a need to streamline reporting of emissions and energy related data to avoid the potential for duplication and reduce the burden on liable entities. (Cement Industry Federation, qr. 38, p. 3)

Other proposed changes to the Safeguard Mechanism

Some participants suggested that other changes to the Safeguard Mechanism should be considered.

> Consider expanding the scope of the Safeguard Mechanism's coverage from 10,000 tonnes to 25,000 tonnes, and include electricity generators … Including generators would create more certainty by creating a market signal for low carbon sources of generation. (Investor Group on Climate Change (IGCC), sub. 166, pp. 8–9)

Several submissions proposed that Australian Carbon Credit Unit (ACCU) use should be limited in the Safeguard Mechanism, as use of ACCUs to comply with the Safeguard Mechanism would decrease on-site decarbonisation.

> For the mechanism to achieve its intended function, it must more effectively incentivise and, where necessary, compel facilities [to] undertake substantive on-site emissions reductions. (ANU Institute for Climate, Energy, and Disaster Solutions (ANU ICEDS), sub. 159, p. 6)

> To be effective, and indeed before expansion, the mechanism requires … limits on offset use, so the Safeguard Mechanism achieves its stated purpose rather than facilitating avoidance of meaningful emissions reduction. (Australia Nursing and Midwifery Federation (ANMF), sub. 184, p. 6)

Trade-exposed baseline-adjusted provisions

Some participants supported having the 2026--27 review of the Safeguard Mechanism consider removing trade-exposed, baseline-adjusted (TEBA) provisions.

> The 2026-27 Review of the Safeguard Mechanism should consider … Options for phasing out Trade Exposed Baseline Adjusted (TEBA) provisions, if the Government decides to implement a border carbon adjustment mechanism. (Australian Council of Superannuation Investors (ACSI), qr. 20, p. 2)

Other participants disagreed with the draft recommendation to remove TEBA provisions because of how it would impact investment confidence.

> BlueScope strongly opposes … recommendations by the Commission to phase out trade exposed baseline adjustment (TEBA) provisions alongside the introduction of a border carbon adjustment (BCA) mechanism … Frequent or early changes to the [Safeguard Mechanism] risk undermining investor confidence and may delay or redirect decarbonisation investments offshore. (BlueScope, sub. 134, p. 2)

Incentives to reduce emissions in transport

Heavy vehicles

There was broad support for introducing a policy to bring down heavy vehicle emissions, with many participants highlighting the importance of technology neutrality. Examples of support are below.

Some participants disagreed.

> The concept of [an] emissions-reduction incentive for heavy vehicles disadvantages regional landholders and rural businesses and impedes their productivity. (Property Rights Australia, sub. 187, p. 1)

> While there may be perceived efficiencies and simplicity to [technology neutral policy], it would introduce competition to nascent industries (such as hydrogen and derivatives) that do not already have existing supply chains at scale or established infrastructure. (Australian Hydrogen Council, sub. 278, p. 9)

Broad support for introducing a policy to bring down heavy vehicle emissions

> "Introducing a technology-neutral incentive framework for heavy vehicles is a pragmatic and necessary step, allowing operators to adopt hydrogen, electric, or low-carbon liquid fuel solutions based on freight task and geography. (Australian Logistics Council, sub. 95, p.2)"

> "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. (Australian Industry Group, qr. 52, p. 3)"

> "Ampol supports a technology-neutral approach to heavy transport sector decarbonisation, recognising that different modes and operational contexts require tailored solutions. This flexibility is recommended to ensure that all viable technologies, whether emerging or established, are given equal opportunity to contribute to emissions reduction. (Ampol, sub. 283, p. 2)"

> "Heavy vehicles represent Australia's most urgent decarbonisation opportunity and policy gap. (Energy Futures Foundation, sub. 238, p. 2)"

> "I support introducing an emissions reduction incentive for heavy vehicles … this is clearly a gap in the current policy environment that requires amendment. (Office of Kate Chaney MP, sub. 141, p. 12)"

> "ReCFIT supports [introducing a new emissions-reduction incentive to cover heavy vehicles] and suggests any incentive targeting heavy vehicles 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. (Renewable, Climate and Future Industries Tasmania, Department of State Growth, sub. 232, p. 3)"

> "[Santos supports introducing an emissions-reduction incentive for heavy vehicles] – consistent with the principle of spreading the burden of emissions reduction across all sectors. (Santos Ltd, sub. 181, p. 3)"

There was a wide a range of views on what policy, or policies, should be introduced. Submissions highlighted advantages and disadvantages of each of the policy options mentioned in our interim report.

Several submissions highlighted the impact of fuel tax credits on emissions reduction incentives, with some recommending capping access at $20 million or $50 million.

> The ACTU agrees that reform of the [fuel tax credit scheme] is long overdue and would help incentivise decarbonisation of heavy vehicles. The Scheme should be capped at $20M p.a. per consolidated group of industries … (Australian Council of Trade Unions (ACTU), sub. 266, p. 7)

> Setting the cap at $50 million would mean only businesses using more than around 97ML of off-road diesel per year would be affected. No farmers, fishers, foresters, road freight operators or smaller miners would be affected. (Fortescue, sub. 216, p. 9)

Several submissions highlighted the role that low-carbon liquid fuels may have for reducing emissions in parts of the transport task and recommended supportive settings.

> The ATA considers that the Government should offer incentives to produce enough renewable diesel to meet 5 per cent of Australia's needs before the end of the 2030s. On the demand side, the Government should implement a low carbon fuel standard based on the California Air Resources Board (CARB) standard. (Australian Trucking Association, sub. 192, p. 7, emphasis removed)

Aside from the introduction of an emissions-reduction policy, several participants submitted that governments will need to ensure regulations and infrastructure support decarbonisation.

> Charging and refuelling hubs remain sparse, fuel distribution networks are incomplete, and maintenance skills are still developing. Without corridor readiness, technology neutrality risks becoming a blunt instrument – diluting incentives rather than driving uptake. (Australian Logistics Council (ALC), sub. 95, p. 2)

> There are currently gaps in policy to support our transition, including suitable infrastructure and a consistent policy and regulatory environment to allow us to make the required investments. (Heavy Vehicle Industry Australia, qr. 36, p. 1)

> Funding and policy frameworks must be supported by effective regulation that provides significant improvement to heavy vehicle access, regulatory reform, and harmonisation, including increasing axle weight limits for electric trucks (aligned nationwide), increasing as-of-right gazetted approval, and implementing an automated access approval system. (NatRoad, sub. 164, p. 5)

Light vehicles

Many submissions opposed removing the fringe benefits tax (FBT) exemption for electric vehicles (EVs). Some recommended reforming the exemption or planning its phase-out over time.

> Rather than abolishing the exemption, reform is required to ensure that it is fairer, better targeted, and structured with a clear pathway for eventual phase-out. (Dr Anna Mortimore, sub. 199, p. 12)

> Phasing out … should be halted until [EVs] account for a reasonable proportion of electric vehicle sales (e.g., 40%) … (ARC Centre of Excellence for the Weather of the 21st Century, sub. 179, p. 3)

> as the cost competitiveness of EVs evolves, it may be appropriate to establish a long-term metric to signal when this support may end. (AIGN, sub. 220, p. 6)

Some submissions suggested removing FBT and luxury car tax exemptions.

> The fringe benefits tax exemptions for vehicles over one tonne are the same category of subsidy as the one the draft report recommends removing for EVs … If the Commission wants to encourage productivity and efficiency, it should be targeting the removal of these perverse subsidies for fossil fuel use rather than second-best subsidies for EVs. (ANU ICEDS, sub. 159, p. 7)

> Remove exemption for utility vehicles (aka utes) from Luxury Car Tax … Publicly available data indicates that a considerable number of utes are likely exempt from LCT each year, notably many of the 2023 best-selling utes have model variants whose cost exceeds the LCT threshold (such as the Ford Ranger and Toyota HiLux). (Streets People Love Hobart, sub. 127, p. 4)

Design and assessment of cost-effective policies

Target-consistent carbon values

Many inquiry participants supported developing and using target-consistent carbon values (TCCVs) to align policy settings across the economy, while others considered alternate approaches would be more useful. Examples of these views are included below.

There was broad support for TCCVs to align policy settings

> "Support for the development of target-aligned national carbon values … National carbon values would assist businesses and policymakers in their decision-making regarding emissions-reductions, helping to signal the most efficient emissions reduction actions within the economy. (Hydro Tasmania, sub. 122, pp. 1, 5)"

> "We support the PC's recommendation for the Australian Government to appoint an independent expert agency to develop National Target-Consistent Carbon Values (TCCVs). (AGL Energy, sub. 231, p. 4)"

> "The use of agreed national carbon values developed by an independent agency could provide an objective and transparent benchmark for evaluating policy effectiveness, reducing the risk of fragmented or inconsistent approaches across jurisdictions. (Australian Industry Greenhouse Network, sub. 220, pp. 6–7)"

Some participants argued that that other approaches would be more useful

> "The ACTU supports the development of "national carbon values" … However … the method used should be a calculation of the "social cost of carbon". (Australian Council of Trade Unions, sub. 266, p. 7)"

> "The crediting and trading framework of the Safeguard Mechanism already provides an implied carbon price that is transparent, market-based and technology neutral. Therefore, the SM represents an effective framework for determining a carbon value. (ACCI, sub. 197, p. 5)"

> "The report should address the plans to implement a national carbon price given the widespread support for carbon pricing amongst economists, businesses, and the Commission itself in its previous reports. (ANU Institute for Climate, Energy, and Disaster Solutions, sub. 159, p. 5)"

Australian Carbon Credit Units

Views were mixed regarding use of Australian Carbon Credit Units (ACCUs). Some participants highlighted that ACCUs could be used to improve consistency across emissions reduction incentives and provide hard-to-abate sectors with more options to reduce emissions.

> We also agree that access to high integrity ACCUs as part of every national emissions-reduction policy in the long-term is appropriate to ensure each sector of the economy has emission-abatement opportunities available and that hard-to-abate emitters face consistent incentives. (AGL Energy Limited, sub. 231, p. 9)

> The AEC supports the adoption of a coordinated economy-wide approach to delivering net zero, supported by a consistent value of carbon for regulatory and policy reforms and access to high integrity Australian Carbon Credit Units (ACCUs) for hard to abate sectors. (Australian Energy Council (AEC), sub. 156, p. 2)

> Robust, high-integrity offsets are critical to smoothing the transition and to addressing residual emissions across the economy. (Australian Energy Producers, sub. 228, p. 9)

Some participants expressed concern about ACCUs and argued that their use in the Safeguard Mechanism should be limited (discussed in Incentives to reduce emissions in heavy industry, above).

Some participants emphasised that barriers to increasing ACCU supply should be removed, such as by implementing all recommendations of the Chubb Review of the ACCU Scheme.

> The federal government should focus on ensuring the country has a good supply of low cost high integrity offsets to give decarbonising economic activity options for lower cost abatement. (Minerals Council of Australia, qr. 89, p. 1)

> Australia's transition to net zero will require a reliable supply of carbon offsets in the short and medium term … To date, the Department of Climate Change, Energy, Environment and Water (DCCEEW) has not provided resources for method development, despite this forming part of the Chubb Review recommendations relating to proponent-led method development. (Kimberley Land Council (KLC), sub. 149, pp. 3–4)

Other views on harmonising emissions reduction settings

Inquiry participants generally supported harmonising emissions reduction settings across jurisdictions and adopting a technology-neutral approach.

> Improving alignment also means ensuring consistency across jurisdictions … we are seeing a patchwork of state-based mechanisms. This fragmentation undermines investment certainty and may lead to duplicative or conflicting infrastructure decisions within what is supposed to be a nationally integrated market. (Australian Pipelines and Gas Association, sub. 10, pp. 4–5)

> The Productivity Commission should conduct a comprehensive review of existing climate change and emissions reduction policies at both Commonwealth and State/Territory level. Redundant and ineffective policies must be eliminated, particularly where there is duplication of policies between the Commonwealth and the states/territories. (Australian Chamber of Commerce and Industry (ACCI), sub. 19, p. 21)

> Concur with the principle of consistency in incentives to reduce emissions irrespective of technology. (Santos, sub. 181, p. 3)

However, some submissions noted that different regions may have specific needs that should be recognised. Other submissions disagreed with adopting a technology-neutral approach, presenting an alternative view that in practice, technology-neutral policies often favoured incumbents and that industrial policy could efficiently reduce emissions.

> The Commission should revise its stance on technology neutrality and advocate for strategic, targeted support for emerging clean technologies where market failures are evident … technology neutral policies … tend to favour incumbent industries and technologies … [and] Do not account for the fact that technology specific policies can complement and reinforce carbon pricing within an overall policy mix. (ANU ICEDS, sub. 159, p. 5)

> Creating broad-based, technology-neutral and jurisdiction-neutral incentives is an essential part of the policy landscape on the journey to net zero – but there are many barriers to decarbonisation that will not be solved with these incentives. (Office of Kate Chaney MP, sub. 141, p. 5, emphasis removed)

Inquiry participants also noted that some carbon values currently being used in policymaking, particularly the interim value of emissions reduction (VER) used in the electricity sector, were too low.

The Interim VER is lower than many international jurisdictions' carbon price, particularly in the period before 2036. It is also far below the UK's traded carbon values (and forecast), indicating that emissions may be unvalued in terms of the cost of achieving legislated targets. (Anonymous, qr. 60, p. 2)

The value of the Interim VER is unlikely to drive changes to operational practices and investment behaviour in the short-medium term, particularly for hard-to-abate emissions sources … the current VER value is too low to make any meaningful changes. (Transgrid, sub. 213, p. 5)

Speeding up approvals for new energy infrastructure

Environmental and other regulatory approvals for clean energy infrastructure are important but can be slow and complex. We asked participants how approvals could be sped-up without compromising standards. We identified four key themes from questionnaire responses and submissions:

A difficult balancing act
Speeding up approvals is important, but not at the cost of regulatory safeguards

National environment law reform
National standards, regional planning, and better engagement among key priorities

Administrative reforms
A strike team and a national coordinator-general might help, but should not be a 'steamroller'

Are clean energy projects 'special'?
Meeting clean energy targets is important, but other industries also support productivity

A difficult balancing act

There was strong support for speeding up approvals for clean energy projects, but we also heard that it is important to improve, or at least maintain, environmental protections. This difficult balancing act was reflected within and across submissions:

Environmental assessments are a bottleneck …

> "[Environmental assessments] are a key source of project delay, cost increase, and investment uncertainty. (Clean Energy Investor Group, qr. 12, p. 2)"

> "Current planning and approval processes for large-scale renewable energy infrastructure are too slow and fragmented, imposing unnecessary costs and deterring investment. For example, it can take four to five years to complete environmental approvals under the EPBC Act alone. (Queensland Renewable Energy Council, qr. 40, p. 3)"

… but we need strong protections

> "Any efforts to improve the speed of decision making needs to coincide with efforts to improve environmental outcomes under the Act … (WWF-Australia, sub. 87, p. 6)"

> "Australia now records the world's highest extinction rate, threatening the wellbeing of future generations. (North Queensland Natural History Group, sub. 125, p. 1)"

> "We caution against any weakening of the EPBC Act to expedite approvals. (Cairns and Fair North Environment Centre, sub. 146, p. 4)"

Reforms can support both developers and environment

> "With the right reforms, Australia can accelerate renewable energy projects, strengthen protections for threatened species and ecosystems, and deliver a transition that is efficient, enduring, and widely supported. (Australian Conservation Foundation, sub. 226, p. 1)"

> "We agree that 'much can be done without compromising the environment', although we qualify this by noting the well-documented negative trajectory for Australia's biodiversity ... (Australian Climate and Biodiversity Foundation, sub. 54, p. 2)"

National environment law reform

Many inquiry participants said that reforms to national environment laws – in particular the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) – were needed to speed up approvals, including reforms to introduce national environmental standards, improve regional planning, provide more information about the environment and cultural heritage, and improve offset arrangements and community engagement.

National environmental standards

Most inquiry participants, including the clean energy industry and environmental groups, strongly supported the introduction of national environmental standards.

> The introduction of national environmental standards would clarify expected outcomes for projects that affect matters of national environmental significance, enabling regulators to make more consistent, efficient, and predictable decisions. This would benefit investors, the energy transition, energy customers, First Nations peoples, the broader community and the environment. (AGL Energy Limited, sub. 231, p. 10)

> National environmental standards will help to create greater certainty for developers and will likely lead to improved environmental decision making. (WWF-Australia, sub. 87, p. 6)

However, a minority had concerns about national environmental standards or their application to bilateral agreements or risk-based assessments.

> [The replacement of EPBC Act assessment triggers with National Environmental Standards] would unlawfully fetter decision-makers and diminish public rights. (North Queensland Natural History Group, sub. 125, p. 2)

> Bilateral agreements aim to reduce duplication, but achieving effective collaboration is inherently challenging when different agencies tackle the same issue with differing processes. (Climateworks Centre, sub. 189, p. 11)

Regional planning

The use of regional planning was strongly supported by most participants. Participants noted that regional plans could improve certainty for developers, protect the environment and account for cumulative impacts.

> We believe that better planning, through both state based Renewable Energy Zones and EPBC regional planning reforms, to guide where development happens is the best way to reduce approval time frames … As well as defining areas that are clearly unsuitable, we need a regional planning approach to ensure that the cumulative impacts of renewable energy are managed. (Queensland Conservation Council, qr. 37, pp. 1–2)

Participants had several recommendations for how regional plans should be used. For instance, some did not want regional plans to override other assessments, some recommended integration with existing systems like natural resource management (NRM) plans and others supported regional planning but were opposed to no-go zones.

> mapping of these areas should not automatically exempt proponents from an environmental approval process in 'go zones'. The LGAQ considers site-specific assessment and consultation a necessary requirement for each proposed development … (Local Government Association of Queensland (LGAQ), sub. 221, p. 13)

> Leveraging existing, continent-wide NRM infrastructure and standing capability will assist in achieving net zero and enable productivity gains. (NRM Regions Australia, sub. 191, p. 2)

> However, we do not support zoning and mapping that prohibits or conditions development (i.e., no go zones) … The EPBC Act – which is an act relating to the protection of the environment and the conservation of biodiversity – is an inappropriate place to consider and regulate all the factors that developers must consider in site-selection. (Anonymous, sub. 209, p. 2)

Information about the environment and cultural heritage

Inquiry participants supported the provision of better information about the environment and cultural heritage, although some called for further action beyond the interim report's recommendations.

Better information is important for approvals

> "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. (Australian Climate and Biodiversity Foundation, sub. 38, p. 16)"

> "Data sharing is critical to improving environmental assessments because it enables cumulative impact analysis, reduces duplication, and builds trust in decision-making. (WWF-Australia, sub. 87, p. 7)"

Further action could be necessary

> "To be truly effective [access to information] must be expanded to include social risk in this data. (Engagement Institute, sub. 157, p. 4)"

> "While Climateworks supports the open sharing of information, we also note the risk of creating the impression or assumption that if something is not mapped, it does not exist. This risk is particularly pronounced for First Nations cultural heritage, as many of these sites remain unmapped. (Climateworks Centre, sub. 189, p. 13)"

Offset arrangements

Clean energy developers and business groups supported efficiency improvements through an Australian Government offsets fund.

> We support the Productivity Commission's recommendation that the efficiency of offset arrangements should be improved … (Anonymous, sub. 209, p. 3)

> [An offset fund] would make offsetting more efficient and reduce the time and cost for project proponents to identify, set aside and manage offsets. (ACCI, sub. 197, p. 7)

But other participants were concerned about environmental risks.

> EDO does not support financial settlement of offsets. This reduces the likelihood of offsets being effectively achieved to compensate for an impact as well as the timeliness of any offset implemented. Where this operates in some states it has led to offsets being approved which cannot actually be delivered and for which the impact should just not have been allowed. (Environmental Defender's Office (EDO), sub. 175, p. 5)

> The Report needs to be much clearer-eyed about the ongoing challenges and chronic failures and in environmental offsetting schemes across Australian jurisdictions. (Australian Land Conservation Alliance, sub. 236, p. 4)

Nonetheless, some called for offset funds that could work for both developers and the environment.

> we are not opposed to a credit based scheme or other mechanism where the Australian Government (or other entity) facilitates provision of offsets and can aggregate these in strategic locations for improved environmental benefit. In this instance the developer could still be effectively paying into a fund, however, this would be on the basis that there is a pool of offset credits available to purchase. (WWF-Australia, sub. 87, pp. 8–9)

Community engagement

Inquiry participants felt that current engagement practices for renewable energy projects were ineffective.

> landholders and community members have consistently expressed to us that the planning process is long, complex and difficult to understand – and, at the same time, that some proponent (and government) consultation processes feel like a 'tick-a-box' exercise. These community stakeholders have also noted the short timeframes and limited resources for communities to provide feedback during the planning process … (The Australian Energy Infrastructure Commissioner (AEIC), sub. 180, p. 4)

> Local host community sentiment is increasingly negative about the meaningfulness of consultation and especially its outcomes which are not addressing the disproportionate, unavoidable negative impacts on local host communities compared with broader communities. (Canberra Region Joint Organisation (CRJO), sub. 217, pp. 2–3)

Overall, inquiry participants supported the PC's proposals to improve the quality of consultation.

> AIGN supports clear expectations for engagement with local communities and Traditional Owners. Constructive and inclusive consultation is vital for both securing a social licence for projects and ensuring that the benefits of the energy transition are widely shared. (AIGN, sub. 220, p. 8)

> We also support the suggestion that the Developer Rating Scheme (DRS) could be used to strengthen the selection criteria for priority projects. (AEIC, sub. 180, p. 4)

Some said guidance about engagement with Aboriginal and Torres Strait Island people should be developed by Indigenous organisations.

> Best-practice principles for engagement with Indigenous people in the ACCU Scheme … and renewable energy projects already exist … These are notable for being developed by Indigenous organisations. They are more practical and realistic and provide more certainty for developers than similar non-Indigenous industry standards ... National environmental standards relating to Indigenous engagement should be developed using these foundations, with appropriate co-governance models. (KLC, sub. 149, pp. 5–6)

Further measures such as mandatory benefit sharing, legally binding standards or the introduction of Local Energy Hubs were also suggested.

> Local councils are calling for legislation, planning processes and guidelines changes to mandate ongoing financial payments by energy companies to councils for the purpose of contributing to broad use council-provided infrastructure and services. (CRJO, sub. 217, p. 2)

> Set legally binding engagement standards that specify consultation timeframes. Require energy transition entities to have and promote internal and external dispute resolution. (Energy & Water Ombudsman NSW, sub. 140, p. 2)

> local communities would be best served by the creation of Local Energy Hubs – a trusted source of information that is accessible in local communities. This is a key missing link for the shift to renewables which requires targeted investment, at scale. (RE-Alliance, sub. 162, p. 7)

Other participants noted that overly prescriptive laws could be counterproductive.

> Current planning frameworks often impose heavier requirements on renewable energy projects than on fossil fuel projects, which undermines fairness and slows down the transition. (Capricorn Conservation Council, sub. 97, p. 3)

> social licence is difficult to legislate. We urge the Productivity Commission to consider and acknowledge that consultation and appropriate benefit sharing arrangements must reflect the needs and desires of each host community. (Anonymous, sub. 209, p. 3)

Considering the energy transition in approval decisions

In the interim report, the PC had a draft recommendation about amending the EPBC Act to require decision-makers to consider the needs of the energy transition in approval decisions. Many participants supported this idea, provided it did not displace rigorous environmental assessments.

> This approach ensures that regulatory decisions reflect Australia's broader decarbonisation goals and provides clarity for long-term investment planning. Doing so would help unlock new opportunities, accelerate innovation, and align industrial activity with national climate targets. (Ampol, sub. 283, p. 3)

> We strongly agree that any assessment under the EPBC Act should consider economic and social factors of a project, along with environmental impact. This should include a requirement to consider how a project might affect Australia's energy transition. (Transgrid, sub. 213, p. 8)

Other participants cautioned that giving special consideration to the transition could erode environmental safeguards or bias decisions toward particular technologies.

> lowering standards of nature protection for renewable energy infrastructure will only exacerbate existing problems with social acceptance of renewable energy infrastructure. (Australian Conservation Foundation (ACF), sub. 226, p. 3)

> Approvals that prioritise speed over coexistence risk generating community backlash, reducing trust, and ultimately delaying or even derailing the transition ... (Queensland Farmers' Federation (QFF), sub. 91, p. 9)

Some said the proposal needed to be clarified to avoid adding complexity. For example, the 'needs of the energy transition' should be defined and that there should be clear criteria for balancing trade-offs.

> What would be the reference point for determining the needs of the energy transition (e.g. AEMO's Integrated System Plan)? Would it capture technologies other than renewable generation (e.g. batteries and gas)? How would trade-offs be assessed between the energy transition and environmental impact? (AEC, sub. 156, p. 3)

Several participants argued that decision-makers should consider both the positive and negative climate impacts of projects, with a number calling for the introduction of a 'climate trigger'.

> we recommend the holistic consideration of the climate impacts of proposed projects, both positive and negative, to ensure that the laws do not compromise environmental outcomes. (Climate Council, sub. 206, p. 11)

> Our preference would be to see a climate trigger … Conversely, projects that will reduce or contribute to reducing global emissions should be given priority status for rapid assessment and approval. (Fortescue, sub. 216, p. 15–16)

> Including a climate trigger in the planning process is one way to remove the grey discount, internalise the externality, and better align capital markets with the fundamental economic realities of net zero transition. (Centre for Policy Development, sub. 188, p. 10)

Administrative reforms

Many participants said changes to administrative arrangements were needed, but many were also concerned about eroding environmental safeguards, marginalising communities or privileging renewable energy over other projects.

Better coordination and faster, more predictable approvals

Several business, infrastructure and industry bodies supported the Coordinator-General and/or strike team concepts as a way to reduce bottlenecks, centralise expertise and provide a clear point of contact for proponents. They emphasised the importance of cross-jurisdictional coordination, regular reporting and a national view of priority projects.

> The proposal to establish a Clean Energy Coordinator-General could help to improve accountability, transparency, and timeliness in the development of priority projects. This role could help ensure that project prioritisation is based on clear, consistent, and nationally relevant criteria, rather than ad hoc or jurisdiction-specific approaches. Regular reporting to the [Energy and Climate Change Ministerial Council] would help maintain national coordination and accountability … (AIGN, sub. 220, p. 10)

> Centralising expertise and responsibilities can support the improved rollout of clean energy infrastructure, provide a clear channel of support for project proponents, and help ensure Australia meets its clean energy objectives. (Institution of Civil Engineers, sub. 93, p. 1)

> A joined-up cross-institutional approach that brings National, State and Territory institutional expertise, as well as other experts outside of these institutions – would harness existing knowledge, capability and experience of organisations and institutions … (NRM Regions Australia, sub. 191, p. 6)

> a prioritisation approach that incentivises proponents to actively progress projects is supported, rather than trying to service all of the existing backlog of projects, some of which may be on hold. (Renewables, Climate and Future Industries Tasmania, Department of State Growth (ReCFIT), sub. 232, p. 5)

Concerns about overriding environmental safeguards

Environmental organisations, community groups and some legal participants warned against changes that might undermine accountability, transparency or bypass normal checks and balances. These submissions generally accepted that greater efficiency and coordination are needed but argued that speed must not trump scrutiny.

> The Coordinator-General role federally is not supported and poses serious risks to accountability, transparency and quality of decision making if remotely akin to similarly named state and territory roles. (EDO, sub. 175, p. 2)

> We wholeheartedly support rapid progression of the renewable energy rollout … however we urge caution to ensure that it does not evolve into a 'steamroller' approach that would infringe on community rights, damage fragile environments and result in community backlash. (Bushfire Survivors for Climate Action, sub. 138, p. 9)

Powers, governance and accountability

Participants said the powers of the Coordinator-General should be carefully circumscribed and that there should be clear accountability. Many argued the function should focus on tracking approvals, escalating bottlenecks, improving information flows and advising on priority lists, but that it should not be able to make or override environmental decisions. Participants also called for explicit statutory limits, transparent reporting and clear terms of reference.

> Establishment of a Clean Energy Coordinator-General should be accompanied by a clear and robust Terms of Reference … with supporting guidance material – developed in close consultation with the renewable energy sector and its peak bodies. (Queensland Renewable Energy Council, sub. 212, p. 2)

> The proposed Coordinator-General has the potential to streamline decision-making for major projects … engagement must be one of its explicit responsibilities to ensure efficiency. (Engagement Institute, sub. 157, p. 5)

> it is important that the Coordinator-General's functions do not allow it to usurp or abrogate community consultation about projects … [They] should also work with government bodies to assist First Nations communities to engage effectively on renewable energy proposals. (Law Council of Australia, sub. 239, p. 7)

> Given the highly regulated nature of Australia's electricity sector, it is recommended that this role be led by an energy agency rather than a centralised agency. This approach will ensure the existing synergies … are maintained, and does not create another layer of bureaucracy … (ReCFIT, sub. 232, p. 5)

Some noted that a coordinator-general with limited powers might have limited success.

> if the Coordinator-General sits outside the regulatory processes, they can facilitate and cajole, but may also find themselves unable to deliver certain outcomes because regulators are operating within, and often bound by, existing laws and processes. (Peter Burnett, sub. 56, pp. 7–8)

Resourcing and capability

Participants said that inadequate resourcing and capability within assessment agencies contribute to delays.

Resourcing for assessment teams

> "Ensuring regulatory agencies are working efficiently and effectively and are adequately resourced is critical for timely approvals. This includes minimising … turnover … (Australian Energy Producers, sub. 228, p. 13)"

> "As well as environmental and clean energy expertise, this initiative would require extensive consultation ... [and] substantial wildlife expertise. (Bushfire Survivors for Climate Action, sub. 138, p. 9)"

> "It is critical that the proposed 'strike team' include integrated landscape planning expertise, and be drawing upon local and relevant high-quality data and information. (NRM Regions Australia, sub. 191, p. 5)"

> "What is needed is expertise in the bio-region as well as understanding of the characteristics of wind farms. (Smart Energy Council, sub. 117, p. 3)"

> "Improved resourcing is needed to improve the expertise and quality of environmental assessment and decision-making … (Environmental Defenders Office, sub. 175, p. 6)"

Some said that regulatory support should extend through the post-approval and construction phases.

> resourcing … should be extended into the post-approvals phase … Resolving roadblocks … to allow construction to commence soon after approvals have been received. (Transgrid, sub. 213, p. 8)

> a strike team approach should start dealing with proposed projects before determination of controlled action … the strike team [should then continue] to monitor to ensure efficient and timely project implementation. (Arup, sub. 194, p. 4)

Submissions from agricultural and regional participants highlighted the need to consider cumulative impacts on farmland, water, biosecurity, rural infrastructure and regional productivity.

> any oversight must: Balance project delivery with the protection of agricultural land, water security, and food production; Monitor and publicly report on cumulative impacts across farming systems, rural infrastructure, and regional productivity … [and] Oversee consistent frameworks for community benefits … (QFF, sub. 91, p. 9)

Coordination across government

Many emphasised that environmental approvals and planning are shared responsibilities, with state, territory and local governments already playing central roles. They caution that new Australian Government structures must complement, not duplicate, existing processes.

> improve coordination between federal and state environmental regulators, rather than just give more authority to federal departments. This might involve, for example, locating the strike teams in each jurisdiction … (AEC, sub. 156, p. 2)

> There needs to be alignment and merging of resources that undertake the same functions across federal and state governments and departments. This consolidation will help streamline processes, avoid duplication and accelerate processing and decision making. (Nexa Advisory, sub. 86, p. 1)

Transparency and prioritisation criteria

Transparency and clear, objective criteria for prioritising projects was a recurring concern. There were calls for public reporting about delays and reasons for escalations, public dashboards and independent audits.

> The LGAQ … supports the idea of incentivising a proponent's rating under the developer rating scheme currently being developed, as well as investments in improving transparency and guidance for all parties … (LGAQ, sub. 221, p. 15)

> Projects with poor environmental outcomes, lack of community support and limited financial backing should not be included [on the priority list]. The inclusion of the proponent rating system in the priority list selection process would be a welcome inclusion for communities. (Voice for Walcha, sub. 182, p. 4)

Focus on EPBC reform and an independent regulator

Some argued that the fundamental problems are structural and that administrative changes will provide only marginal improvements. In addition to deep reforms to environment laws, many called for a well-resourced, independent national regulator.

> The fundamental problem is structural, not administrative. (QFF, sub. 91, p. 8)

> A well-resourced, independent expert regulator is an important complementary measure to the proposed standards, and will improve nature protection outcomes, increase community confidence in the administration and enforcement of the Act, and reduce variability and delay in decisions. (ACF, sub. 226, p. 2)

> Environmental Protection Australia … could equally be tasked with improved coordination and decision making without the need for creating additional bureaucratic structures and processes. (Re-Alliance, sub. 162, p. 8)

While many supported additional coordination, several cautioned against adding bureaucracy and duplication to an already complex process.

> [The strike team] risks adding bureaucratic layers, deferring decision-making and exacerbating delays in the energy transition. Instead, we suggest that these resources be directed to addressing the root causes of planning and approvals delays. (Nexa Advisory, sub. 86, p. 1)

> A Coordinator-General with no decision-making authority potentially adds no additional efficiency to the process and merely acts as a messenger … (Smart Energy Council, sub. 117, p. 4)

Are clean energy projects 'special'?

Several industry groups questioned the focus on renewable energy. They argued that approvals reform should be technology-neutral and cover all decarbonisation, industrial transformation and infrastructure that contributes to national productivity.

> The EPBC Act should apply a consistent approach to the approval of major infrastructure projects across all industry sectors and not have special arrangements for individual sectors (ACCI, sub. 197, p. 7)

> BlueScope supports improved coordination and oversight of priority decarbonisation projects … the role should encompass all decarbonisation efforts, not just renewable energy … (BlueScope, sub. 134, p. 16)
>
> Focussing … on one area risks adding further delays to other projects that are needed for growth in the national economy. (Chamber of Minerals and Energy of Western Australia, sub. 170, p. 9)
>
> rail electrification, depot charging, and hydrogen hubs [should] be explicitly included under the Coordinator-General's remit. (ALC, sub. 95, p. 3)
>
> a similar model should be used to address approvals-related issues for industrial decarbonisation projects, which are also essential to the transition to a lower emissions economy. (Cement Industry Federation, sub. 153, p. 4)
>
> The PC's focus on renewables as the 'best' decarbonisation solution is flawed and a clear example of picking winners. The recommendations for accelerating renewables projects … should be applied to all projects which enhance the economic welfare of the nation. (Santos, sub. 181, p. 5)

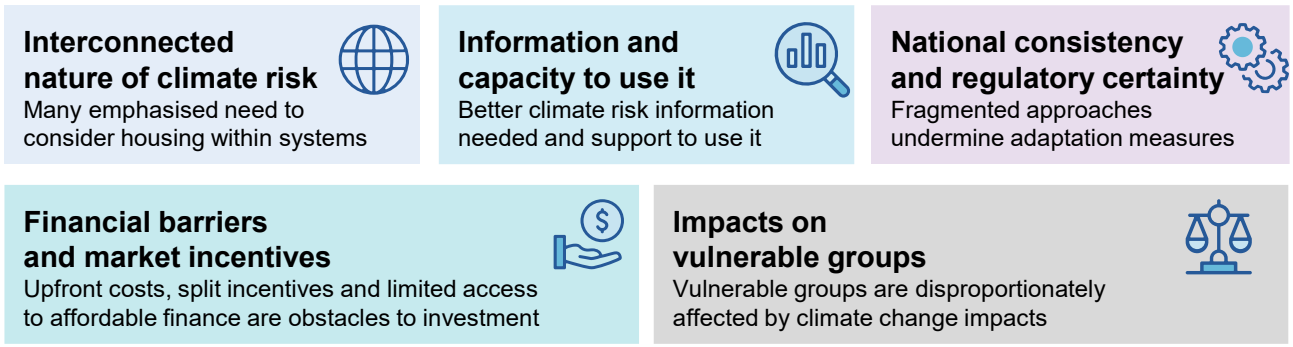
Other participants challenged the premise of the chapter, arguing that faster approvals for renewable energy will not reduce energy costs and increase productivity.

> The recommendations … will not reduce electricity costs or improve productivity, as higher penetrations of renewables increase electricity costs. (CIS, sub. 152, p. 1)

Addressing barriers to private investment in adaptation

This reform area focused on improving Australia's resilience to climate risks through private investment in adaptation. While several of the PC's proposed reforms are whole-of-system, such as the climate risk database, we also focused on housing within the built environment to show how governments can design practical, coordinated measures to drive resilience in one system.

Consultation focused on identifying the barriers to private investment in adaptation and practical ways to make Australia's housing stock more resilient. We identified five key themes from questionnaire responses and submissions.



Interconnected nature of climate risk

There was strong support among many participants for a holistic approach to climate resilience. Some submissions emphasised the need to consider housing within broader community, infrastructure and environmental systems. Others expressed the view that addressing resilience in isolation risks inefficient and unsuccessful delivery of adaptation outcomes.

Many participants highlighted the importance of integrating climate resilience across sectors, including transport, energy, water and social infrastructure.

> housing is only one component of an integrated system, and addressing it in isolation risks inefficient and unsuccessful delivery of the net zero transformation. (NRM Regions Australia, sub. 191, p. 7)

> if housing is resilient but roads (including evacuation routes) are not, this may lead to stranded assets and risks to life. (IGCC, sub. 166, p. 10)

> adaptation in the home may prove to be ineffective if supporting infrastructure and services are not similarly protected. For example, there may be little point protecting a single home, if the suburb, schools and services are not similarly protected from flooding. (Actuaries Institute, qr. 83, p. 3)

> Changing climate and weather patterns in recent years have highlighted the importance of resilient infrastructure, including the rail network. This resilience is not only for the benefit of the industries that rail supports but for the communities across Australia which rely on rail for access to essential goods and services. (The Australasian Railway Association, sub. 160, p. 8)

Submissions commonly noted that climate resilience must be planned and delivered at multiple scales – from individual homes to neighbourhoods, cities and regions – and must involve all levels of government.

> Specific interventions to improve the resilience of housing stock are critical, to ensure that people are protected against climate harms, however, this aim must be situated within community and infrastructure-level resilience planning. Unless the micro and macro scale are addressed in tandem, people will be left vulnerable. (IGCC, qr. 33, p. 5)

> We feel the sub-heading 'Australians need resilient housing' could be improved by broadening it to 'Australians need resilient cities and regional centres'. This acknowledges the significant role that all three tiers of government have in planning, designing and maintaining the infrastructure that services and integrates with housing. (Streets People Love Hobart, sub. 127, p. 4)

> Improving the resilience of housing is critically important. People's homes need to be considered within their neighbourhood or local area context. For example, urban greening has been shown to reduce the impacts of urban heatwaves. (Brotherhood of St Laurence (BSL), sub. 126, p. 4)

Information and capacity to use it

Participants called for accessible, property-level risk data and clear performance signals, underpinned by nationally consistent hazard mapping and plain-language tools to support informed decisions by owners, renters and investors. Many submissions highlighted the benefits of a centralised climate risk information database, noting that it would support risk assessment, planning, insurance and investment decisions.

> Access to accurate, granular, and trusted data – integrating both current and projected risks for hazards such as flood, bushfire, cyclone, extreme heat, and coastal inundation – is essential for informed decision-making by households, builders, developers, insurers, and governments. (Insurance Council of Australia (ICA), sub. 131, p. 2)

> Improved transparency and information sharing would enable households, businesses, and governments to better understand, plan for, and quantify the potential climate hazards affecting various parts of the country. (AGL Energy Limited, sub. 231, p. 12)

> A national climate risk database would strengthen community understanding of climate risks and enable all levels of government to plan effectively for adaptation. (South East Councils Climate Change Alliance (SECCCA), sub. 171, p. 3)

Participants also suggested improved climate risk information could provide benefits to businesses as well as households and governments.

> A centralised, publicly accessible platform would enhance transparency, improve risk planning, and support informed decision-making for both government and industry. (Ampol, sub. 283, p. 4)

> Draft recommendation 3.1 to set up a climate risk information database would provide a nationally consistent source of information to support broader assessments of physical risks associated with climate change. A nationally consistent resources would support assessment and reporting of physical risks across a broader range of frameworks, such as the climate related financial disclosure reforms. (AIGN, sub. 220, pp. 10–11)

> A reliable central database would improve understanding and communication with customers about property location risks, support targeted engagement, education and insights. (National Australia Bank, sub. 268, p. 14)

Accessibility and usability

Many participants noted that information must be accessible, tailored to different users, and supported by education and guidance.

> Clear guidance and training for users to support informed decision-making, acknowledging the complexity and inherent uncertainty of climate projections. These caveats must be clearly communicated, understood and appropriately applied by users. (BlueScope, sub. 134, p. 17)

> The SA Youth Forum agrees with the idea of this database, with many of the young people we have consulted expressing the idea of the difficulty of finding information regarding the climate and risk being exceedingly difficult and therefore causing problems in literacy and understanding. (South Australian Youth Forum, sub. 113, p. 6)

> merely collecting more information about climate risks is clearly inadequate. The Government must embark on an ambitious course of adaptation funding and policy development … in order to actually *address* the risks. (ACTU, sub. 266, p. 9)

> Climate hazard and risk data should be tailored to a range of users, from novice to advanced, and should provide translation pieces to guide users who are not experienced in interacting with climate data. (ReCFIT, sub. 232, p. 7)

Information provision alone is not enough

Many participants stated information must be supported by other measures to ensure resilience.

> information provision alone is not sufficient to reduce climate risks if climate-resilient homes do not exist or are not affordable in a given area. (BSL, sub. 126, p. 3)

> Provision of hazard information alone is unlikely to improve decision making or reduce risk exposure. Ideally, support would be multi-layered, focused on information as well as incentives, regulation, and 'next step' guidance ... (ReCFIT, sub. 232, p. 7)

> effectiveness will depend on being backed by appropriate supports and resources to ensure that impacted communities can understand, engage with, and act on the information provided. (ANMF, sub. 184, p. 9)

Resilience ratings for housing

Feedback indicated support for the development of a nationally consistent resilience rating system for housing, with many participants highlighting the need for a trusted framework to provide certainty for households, builders, insurers, and policymakers. Submissions emphasised that such a system should prioritise improving the resilience of existing housing stock, be supported by clear guidance, and align with existing schemes such as NatHERS.

> A well-designed rating system has the potential to provide households, builders, insurers, and policymakers with clear, trusted, and location-specific information on the resilience of individual properties, and to identify practical, cost-effective upgrades that would reduce risk from climate hazards. (Australian Institute of Company Directors, sub. 259, p. 28)

> There is strong cross-sector support for the urgent national adoption of the Resilience Ratings Scheme. Endorsements come from Parliamentarians, industry, investors, professional bodies and social advocates, while successive national and state inquiries have consistently recommended

> the tools and incentives that the Ratings now deliver. Together, this demonstrates the Ratings' central role in Australia's adaptation strategy. (Resilient Building Council (RBC), sub. 204, p. 19)

> Climateworks recommends a national rating tool to complement processes for mandatory Development Assessment (DA), either through the National Construction Code (NCC) or planning approvals, so that it has the potential to be adopted as mandatory and is as seamless as possible for consumers and industry alike. (Climateworks Centre, sub. 189, p. 15)

Several participants noted the importance of ensuring the system is practical, inclusive and does not impose excessive regulatory or cost burdens, particularly on vulnerable groups. A mandatory resilience rating system for all new builds was suggested by some as a potential solution.

> The idea of retrofitting existing housing as a means of improving resilience has a great deal of merit. However, ReCFIT does not believe the case has been made that a star rating system is the right approach. A rating scheme will not encourage or support the uptake of resilience improvements in legacy housing that was likely built with a lower level of resilience and in locations where risks or hazards are already prominent. (ReCFIT, sub. 232, p. 7)

> A Resilience Star Rating System for every home and business in Australia may encourage households and businesses to adopt resilience measures, though would need time to socialise and be accepted at the population level … A Resilience Star Rating System could be mandatory for all new residential and commercial properties informing occupiers of risks and resilience measures. (Natural Hazards Research Australia, sub. 92, p. 3)

Concerns about unintended consequences of information provision

Several participants raised concerns that better information could increase risks of non-insurability or higher costs for some.

> There is a risk that state and local governments may require existing businesses identified to be in high-risk zones to implement risk mitigation measures and/or face increased restrictions on new developments and their current business activities. Businesses identified to be in high-risk zones are also likely to face increased insurance costs or may not be able to obtain insurance at all. (ACCI, sub. 197, p. 8)

> While the proposal of a resilience rating system for housing is theoretically sound, there is a strong risk that this approach could place the burden of adaptation onto individuals with limited capacity to comply … For low-income households, the financial inability to retrofit homes not only undermines resilience but also risks devaluing property and raising insurance premiums – burdens that are carried by individuals, creating compounding disadvantage. (ANMF, sub. 184, p. 10)

National consistency, regulatory certainty and oversight

There was strong support for greater national consistency and regulatory certainty in climate resilience standards, planning and information provision. Many participants highlighted that fragmented approaches across jurisdictions create confusion, increase costs and undermine the effectiveness of adaptation measures.

There was strong support for aligning new resilience measures with existing frameworks and for coordinated action across all levels of government.

Integration and coordination

Participants reflected on the need for national consistency, integration with existing frameworks and coordination across jurisdictions.

> National consistency reduces costs for builders and ensures equity for households across jurisdictions. (SECCCA, sub. 171, p. 4)

> Inconsistent or lagging policy frameworks across jurisdictions can create uncertainty. Specifically, the National Construction Code 2022 changes to residential energy performance have not yet been fully or consistently adopted across all states. This inconsistency creates uncertainty for developers and can delay the widespread adoption of improved thermal performance standards. (Cbus Super, qr. 19, p. 2)

> A nationally coordinated, property-specific database, underpinned through work undertaken by the Hazards Insurance Partnership, which is updated regularly and based on best-available data, would provide a consistent evidence base for land use planning, building code reforms and targeted mitigation investment. (ICA, sub. 131, p. 2)

Participants reflected on the need for coordinated action across the Australian, state, territory and local governments to ensure consistent standards, data and implementation.

> The Commonwealth must coordinate with the states and territories to ensure a uniform approach to the data that is collected and that the data is presented in a nationally consistent format. (ACCI, sub. 197, p. 8)

> Crucially, regulatory reform must be coordinated across levels of government and aligned with broader policy initiatives, such as planning reforms, building electrification pathways, and the National Energy Performance Strategy. (Australian Sustainable Built Environment Council (ASBEC), sub. 119, p. 5)

> Inconsistencies in building and rental standards across jurisdictions creates inefficiencies when coordinating multiple projects nationally and necessitates the duplication of planning processes. (Salvation Army, qr. 10, p. 3)

Minimum resilience and disclosure standards

There was strong support for harmonised, forward-looking standards for resilience and energy performance, implemented in a phased and predictable way to avoid jurisdictional fragmentation and provide confidence for industry and consumers. Participants noted that national consistency reduces compliance costs, improves market confidence and ensures equitable outcomes for households and businesses.

> Minimum standards provide the certainty, consistency and consumer confidence the market needs to scale up solutions that benefit all Australians. (ASBEC, sub. 119, p. 4)

> Minimum standards are critical to ensuring a ‘floor’ in the resilience of Australia’s housing stock. (Energy Efficiency Council (EEC), qr. 24, p. 6)

> Minimum standards must be based on future climate risks – not just historical data – and apply to both new builds and significant renovations. From an insurance perspective, mandatory resilience standards would reduce systemic risk and help ensure long-term insurability in hazard-prone regions. (ICA, qr. 11, p. 5)

Submissions commonly noted the need to align new resilience standards and information systems with existing frameworks such as the National Construction Code (NCC), NatHERS and state planning systems. Some participants called for stronger regulation, including updates to the NCC, minimum rental and social housing standards and mandatory disclosure of energy and resilience ratings at point of sale or lease to drive market demand and transparency.

> As Australia's understanding of physical climate impacts increases, the NCC will need to be updated to reflect new climatic conditions … This may require the NCC to upgrade the design standards for currently included wind regions and may require the application of the specification to new regions. (Engineers Australia, qr. 73, p. 6)

> The NCC will be one of the most important levers for ensuring that the new homes we build are fit for the climate impacts of today and the future. (Green Building Council of Australia, sub. 230, p. 6)

> In addition to the implementation of minimum standards, there needs to be greater government focus on ensuring compliance with the technical requirements of the NCC to ensure safe and sustainable buildings. (ICA, qr. 11, p. 5)

Other participants cautioned that regulatory changes, such as changes to the NCC, must be practical, avoid excessive compliance burden, and be accompanied by clear guidance and support for implementation.

> The housing sector is already excessively over-regulated … The introduction of any new regulatory system on housing must involve minimal additional administrative and cost burden on the housing sector. (ACCI, sub. 197, p. 8)

> Minimum standards can play a role in lifting the baseline quality and resilience of Australia's housing stock, but they must be balanced, nationally consistent, and implemented with flexibility to avoid unintended consequences on housing supply, affordability, and project feasibility. (Urban Taskforce, qr. 90, p. 2)

> Piecemeal, state-based approaches increase regulatory complexity and compliance burden for builders and manufacturers, ultimately undermining the productivity gains they seek. (Affiliated Insulation Industry Coalition, sub. 62, p. 3)

National monitoring, evaluation and learning

There was strong support for assigning responsibility for national-level monitoring, evaluation and learning on climate adaptation to an independent body, with many participants endorsing the Climate Change Authority for this role. Many highlighted the benefits of regular, independent and transparent reporting to hold governments accountable, identify policy gaps and guide efficient investment in adaptation.

> Centralising oversight in an independent body can help ensure adaptation planning is evidence-based, transparent, and aligned with national climate objectives. (ANMF, sub. 184, p. 11)

> We also support a national approach to monitoring, evaluation, and learning, which would serve Australia well as this will be key in supporting business, households and government plan for and adapt to the impacts of climate change. The body tasked with this responsibility should be independent of government and possess expertise in climate adaptation. AGL considers that the Climate Change Authority may be a suitable organisation for this role – provided it is adequately resourced to carry out the task effectively. (AGL Energy Limited, sub. 231, p. 13)

> Independent, transparent assessments of progress are essential to hold governments accountable, identify policy gaps, and ensure investment is directed towards measures that deliver the greatest resilience benefits. (ICA, sub. 131, p. 4)

Financial barriers and market incentives

Many participants expressed concern about the financial barriers that impede investment in climate-resilient housing. Upfront costs, limited access to affordable finance and split incentives were commonly cited as significant obstacles for owner-occupiers, landlords and developers.

> Upfront capital costs of undertaking adaptations are a significant barrier, with most government schemes focused on electrification, rather than resilience. (IGCC, qr. 33, p. 5)

> Cost is the greatest barrier impacting Salvation Army Housing's decisions for how housing is built and updated to be resilient to the effects of a changing climate and inversely, the greatest enabler is funding. (Salvation Army, qr. 10, pp. 1–2)

Some submissions identified risks that financial barriers could entrench disadvantage, particularly for low-income households and renters, and that incentives must be designed to avoid exacerbating inequities.

> Households unable to afford voluntary upgrades will be locked into poor-quality, high-cost, and climate-vulnerable homes. (ASBEC, sub. 119, p. 4)

> Many households, particularly those on low incomes, cannot afford the upfront costs associated with making their home more climate resilient. (EEC, qr. 24, p. 4)

> Without finance mechanisms or targeted support, reforms will have regressive effects, entrenching affordability pressures in housing and creating financial stress for smaller firms. Any new mandate must be accompanied by financing, incentives or transitional support to protect equity and viability. (Master Builders Australia, sub. 275, p. 18)

Submissions highlighted the role of financial innovation and targeted incentives in overcoming barriers and enabling investment in resilience upgrades.

> Green finance products, such as sustainability-linked loans or green bonds, are increasingly enabling developers to fund resilient projects with favourable terms. (Cbus Super, qr. 19, p. 3)

> Broader access to green finance options (including incentives and subsidies) can accelerate energy efficiency upgrades and renewable adoption at household level. (Mortgage and Finance Association of Australia (MFAA), qr. 75, p. 2)

> expand[ing] the Australian Sustainable Finance Taxonomy to incorporate resilience criteria for eligible investments in systemic adaptation and resilience … will enable better capital flow to resilient developments, or adaptation measures in existing developments. (IGCC, qr. 33, p. 6)

Some participants noted that market incentives are not always aligned with resilience outcomes, and that split incentives between landlords and tenants, or between builders and buyers, can limit uptake.

> Landlords are reluctant to invest in upgrades that primarily benefit tenants (e.g. energy efficiency, insulation), while tenants have limited power to influence building performance. (Cbus Super, qr. 19, p. 2)

> The degasification (replacing gas heating and appliances) for climate-resilience reasoning incurs higher capital costs for development proponents who typically sell on completion, the long-term benefits (e.g. reduced energy bills or lower insurance premiums) to the buyer, not the builder. This creates a 'split incentive' that discourages investment in sustainable features unless there is strong market demand or policy support. (Urban Taskforce, qr. 90, pp. 1–2)

> Renters do not have authority and control to make major upgrades to their properties. Renters are reluctant to ask landlords for these upgrades due to threat of eviction or potential rent increases that are already increasingly unaffordable in many major cities. Landlords do not get the direct financial

benefit of cost-savings, so do not have an incentive to do this. There is also no requirement to make these upgrades under tenancy laws and regulations in NSW. (Uniting NSW and ACT, qr. 50, p. 3)

Impacts on vulnerable groups

Consultation underscored the importance of ensuring that households with low-incomes, people who rent, many Aboriginal and Torres Strait Islander communities and people in regional areas are not left behind. Many participants noted these groups are disproportionately affected by climate change impacts.

Some submissions raised concerns that without a targeted focus on vulnerable groups, resilience could entrench disadvantage or create unintended consequences.

> Many people in these communities face barriers to adaptation (such as cost, control, trust, and information). As a result, they often have restricted adaptive capacity and are more likely to be negatively impacted by extreme weather events. (BSL, sub. 126, p. 4)

> We recognise that many of the above strategies will render property in high risk areas worthless (or nearly worthless). This means that the brunt of the damage resulting from historic poor planning and climate inaction will fall very inequitably on a relatively small sub-section of property owners, in lower socio-economic areas who are likely to have no other assets. For these families the results will be devastating. (Financial Rights Legal Centre, qr. 47, p. 3)

> Lower socioeconomic communities will be the most significantly hit by the climate crisis, and therefore should be prioritised in improving the resilience of housing stock. (South Australian Youth Forum, sub. 113, p. 7)

> Without targeted action, resilience policies could widen inequality – benefiting children from families who can afford housing resilience upgrades while leaving others behind. (UNICEF Australia, sub. 202, p. 5)

Many participants emphasised the need for targeted support, inclusive consultation and tailored adaptation strategies for vulnerable groups.

> In improving housing resilience over time, initially, climate-resilient affordable housing should be prioritised for those most at risk e.g. for women at risk of homelessness, including single mothers, older women, and low-income renters. (Global Institute for Women's Leadership at the Australian National University, sub. 84, p. 4, emphasis removed)

> Additional supports are required for citizens who cannot respond to a price or information signal to ensure that inequitable outcomes are not exacerbated in the existing housing crisis. (Australian Local Government Association, sub. 96, p. 12)

> We recommend this work should be underpinned by principles of equity, ensuring low-income households and remote communities are prioritised and supported with targeted public funding to improve housing resilience. (The Uniting Church in Australia, Queensland Synod and UnitingCare Queensland, sub. 183, p. 5, emphasis removed)

> It is also important that low-income households and residents of social housing receive adequate support to be able to participate in and benefit from these programs. (Bushfire Survivors for Climate Action, sub. 138, p. 10)

Emerging reform ideas

During the consultation process participants raised some reform ideas that were outside of the scope of this inquiry. Some of the ideas are outlined below.

Consumer energy resources

Inquiry participants raised opportunities related to consumer energy resources (CER). Participants suggested that improving the integration of CER into the electricity grid could reduce network costs and improve efficiency but often noted that policy settings did not sufficiently incentivise CER coordination and integration.

> Demand management will help optimise existing network assets and reduce the need for new infrastructure investment. Currently, demand-side measures – including energy efficiency, electrification, energy management, demand response, demand flexibility and load shifting – are not sufficiently coordinated … Responsibility for demand-side measures, including demand flexibility, energy efficiency and consumer energy resources, remains fragmented … A demand strategy through the [Energy and Climate Change Ministerial Council] would set out governance and objectives including for the areas outlined above. (Climateworks Centre, sub. 189, pp. 3–4)

> CER can generate substantial productivity gains – lowering infrastructure costs, cutting household power bills and freeing capital for higher-value activities … However, current regulatory and incentive structures are not fit for this new reality. (Tech Council of Australia, qr. 76, p. 1)

> demand side management is another lever to reduce emissions and stabilise energy costs. The more efficient the energy system, the less generation capacity will need to be deployed, minimising capital costs and consumer prices … Better use of consumer energy resources, storage technologies, demand management and better urban planning can all reduce energy generation requirements in the short-to-medium term. (Australian Academy of Technological Sciences and Engineering, sub. 14, p. 6)

Insurance affordability

Insurance affordability emerged as a theme across participant submissions, with many highlighting the growing challenge of rising premiums and reduced coverage in areas exposed to climate risks. Participants consistently called for systemic reforms, improved risk information and targeted investment to address the underlying drivers of insurance costs.

> Often communities with the least financial resources are also facing the highest insurance costs, as identified in the Actuaries Institute report into Insurance Affordability and Home Loans at Risk (August, 2024), where 15% of Australian households face extreme insurance affordability stress, which is measured as combination of income levels and disaster risk exposure. (RBC, qr. 88, p. 4)

> In the current cost-of-living crisis, state governments are collecting more revenue from insurance taxes ($7.6 billion in 2023) than insurers make in profit ($4.6 billion), creating disincentives for adequate insurance coverage and resilience investments. Immediate tax reform is necessary to alleviate this burden and unlock more affordable risk mitigation strategies for households. (ICA, qr. 11, pp. 3–4)

We also note that in general, because home insurance premiums are based on risk at an individual property level, many homeowners in high-risk areas experience home insurance affordability stress. This can impact the level of financial protection they have to recover from adverse events, and can have wider community and social impacts. (Actuaries Institute, qr. 83, p. 2)

Since 2010, natural disasters have generated over $34 billion in insurance claims, with recent years showing a sharp escalation – $22.5 billion in the past five years alone, up 67 per cent on the previous period. Research by the McKell Institute for the ICA estimates these costs will rise by around 5 per cent annually, reaching at least $35 billion a year by 2050. Without decisive action to address underlying risk, these trends will continue to drive up costs for households, communities, and governments. (ICA, sub. 131, p. 1)

A. Overview of engagement

Details of the consultation process and engagement methods for the inquiry are outlined below.

Consultation phases

Figure A.1 outlines the inquiry timeline and the key phases of consultation. In addition to the formal opportunities provided for participants to share their views, we also held meetings with participants and maintained a '5 pillars' e-mail inbox open for correspondence throughout the inquiry.

Figure A.1 – Inquiry timeline and consultation phases

The responses received through Australia's Productivity Pitch are not summarised in this paper. A summary of what participants told us during this initial phase of consultation was published in February 2025. Read Australia's Productivity Pitch.

Engagement methods

We gathered written feedback from participants through three main methods.

Online questionnaires

We developed a targeted questionnaire to explore specific issues related to the three reform areas and to inform the direction of our interim report. The questionnaire included open-ended questions, allowing participants to provide responses focused on particular aspects of the reforms. We also gave participants the option to submit additional documents to support their response. Read responses to the consultation questionnaire.

Pre-interim submissions

Some participants chose to provide submissions by email instead of completing the online questionnaire. These contributions were viewed alongside the questionnaire responses when drafting the interim report.

Post-interim submissions

Following the publication of the interim report on 3 August 2025, we sought further input on the reforms through information requests included in the interim report. Participants were asked to upload their submission via an online webform, with an option for uploading supporting documents.

Participants were also given the opportunity to make submissions via video or phone call.

Other consultation

In addition to written responses, we held 156 meetings with organisations and individuals, including government agencies, companies, peak bodies, Aboriginal and Torres Strait Islander organisations, consultancies and think tanks. These meetings were held on a confidential basis to enable open discussion and are not summarised in this paper. The discussions informed our understanding of the issues and contributed to the development of our reform areas and the draft and final recommendations.

Participation

We received 91 questionnaire responses, 44 pre-interim submissions, and 239 post-interim submissions from across the Australian community.