Investing in cheaper, cleaner energy and the net zero transformation inquiry

Questionnaire response 76

Name: The Tech Council of Australia

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1. Reduce the cost of meeting carbon targets

1. What could be done to improve the cost-effectiveness and alignment of policies to reduce emissions across the industrial, electricity and transport sectors?

TCA does not intend to respond to the specific reform areas outlined under this pillar. While we recognise the importance of planning, approvals and adaptation within the broader net-zero transformation, these are not core areas of our policy focus. Instead, we offer the following observation on how targeted regulatory reform can unlock one of Australia's most significant productivity opportunities in the clean energy transition.

Australia is undergoing a rapid shift in its energy landscape, driven by the uptake of consumer energy resources (CER) such as rooftop solar, home batteries, electric vehicles (EVs) and smart appliances. By transforming consumers from passive energy users into active participants, CER can generate substantial productivity gains—lowering infrastructure costs, cutting household power bills and freeing capital for higher-value activities. For the wider economy, more efficient energy use means reduced operational overheads for small businesses, sharper competition among energy providers and the accelerated scaling of innovative energy-tech firms.

However, current regulatory and incentive structures are not fit for this new reality. Distribution network service providers (DNSPs) remain rewarded for capital expenditure on traditional transmission and distribution assets rather than demand-side solutions. Outdated tariff structures penalise efficient CER technologies—such as EV chargers and smart loads—with high peak charges, discouraging their deployment despite clear productivity benefits. A deliberate shift is required: regulators must move from top-down supply management to policies that optimise demand, enabling consumers to participate in grid balancing. AEMO estimates up to A$4 billion in network capital expenditure could be avoided through strategic CER rollout—funds that could instead be invested in digital innovation and next-generation services.

CER is also a major contributor to supporting the energy requirements for Australia's digital economy. As energy-intensive industries—particularly data centres—expand to power AI, cloud computing and other tech-driven services, grid pressure will intensify. Through leveraging CER and demand-response mechanisms, we can defer or reduce expensive investments in new generation and transmission. In doing so, Australia not only strengthens the resilience and affordability of its energy system but also underpins the productivity of critical digital infrastructure. Aligning market incentives, tariff design and regulatory frameworks with a consumer-led energy model is therefore one of the most actionable ways to drive national productivity, lower costs for households and businesses, and support Australia's transition to a prosperous, low-carbon future.

2. Are there gaps in the emissions-reduction policies in the industrial, electricity and transport sectors which should be addressed?

   The participant did not respond to this question.

3. Are there any duplicative emissions-reduction policies in the industrial, electricity and transport sectors which could be streamlined?

   The participant did not respond to this question.

2. Speed up approvals for new energy infrastructure

1. Are planning and approvals processes for large energy infrastructure taking too long? If so, what causes the most delay?

   The participant did not respond to this question.

2. How can planning and approvals processes be sped up without unduly compromising regulatory standards?

   The participant did not respond to this question.

3. Should clean energy projects be treated differently to other projects for the purpose of environmental and other approvals? If so, how?

   The participant did not respond to this question.

4. What can be done to build local community support for new energy infrastructure projects?

   The participant did not respond to this question.

5. Please outline any evidence showing the productivity benefits of faster approvals for energy projects.

   The participant did not respond to this question.

3. Encourage adaptation by addressing barriers to private investment

1. What are the barriers and enablers impacting decisions by owner-occupiers, landlords and developers about how housing is built and updated over time so that it is resilient to the effects of climate change?

   The participant did not respond to this question.

2. What information do people need to make decisions about where to live, how to build and how to upgrade their homes to appropriately factor in climate change?

   The participant did not respond to this question.

3. What are the most cost-effective retrofitting options for improving the resilience of Australia's existing housing stock? What are their costs and benefits?

   The participant did not respond to this question.

4. What role might minimum standards play in ensuring the resilience of Australia's housing stock?

   The participant did not respond to this question.

5. The impacts of climate change are being factored into the regulation of where and how houses are built in different ways around Australia. What does leading practice look like? Where is there room for improvement? Are there lessons we can learn from other countries?

   The participant did not respond to this question.

Cover sheet: Supporting document #1

TechCouncil of Australia

Kickstarting productivity through the Australian tech sector

Australia has a once-in-a-generation opportunity to lean into structural challenges and reposition our economy for a new global reality. Domestically, we are confronting lower GDP growth, slowing productivity, demographic shifts, and declining workforce participation. Globally, we are navigating a shifting world order alongside the rise of new industries, supply chains, and trading relationships.

The tech sector and digital economy will be central to how we respond, with AI an intrinsic part. The digital economy and broader tech sector offer critical levers for boosting productivity, attracting investment, and building sovereign capability. Now is the time to lean into this opportunity—while we still can—and lay the foundations for the industries of the future.

Australia's prosperity has always tracked the tools we put in people's hands. Each time a breakthrough technology—tractors, container shipping, broadband—has spread through workplaces, output per worker has risen and real wages have followed. Today that dynamic is sputtering: productivity growth is the slowest in 60 years, and if this slowdown persists the average Australian will be noticeably poorer just as an ageing population tightens budgets.[1]

At its core, productivity is about doing more with less. Efficiency gains matter—but history shows the biggest leaps come when those savings are paired with entirely new sources of value. True productivity growth unlocks fresh opportunity as much as it trims inefficiency.

Australia's tech sector can drive this next wave of productivity growth. Whether it's AI that clears hospital-imaging backlogs and frees clinicians for complex care; precision-agriculture platforms that combine IoT sensors and analytics to help farmers launch premium, sustainable-produce lines; or fintech marketplaces that let small businesses instantly access microfinance and expand into new export markets—these are tools that expand what Australians can accomplish.

The tech sector is deeply intertwined with almost all sectors of the national economy, meaning strong economic fundamentals are in the sector's direct interests. Further, the success of the tech sector in Australia directly relies on settings that support innovation and tech adoption, access to capital, access to talent, and fit-for-purpose regulation.

We welcome the Productivity Commission's (PC) Productivity Review as a chance to co-design a growth-led agenda that keeps Australia globally competitive. In particular, we support the five reform areas identified by the Commission and commit to developing actionable, targeted and impactful proposals in each domain. The Tech Council looks forward to ongoing engagement with the Commission and Government to advance Australia's productivity agenda.

[1] Treasury, *Intergenerational Report (2023)*.

Technology investment can drive productivity growth across our economy

We strongly support the development of policy options that will incentivise investment and drive innovation across the economy. Australia enters this decade at a pivotal juncture. R&D investment has fallen from 2.1% of GDP in 2011 to 1.7% today, and the long tail of the mining boom is receding. The next phase of national prosperity will depend on how we apply technology and innovation—not only to lift productivity in traditional strengths in mining, agriculture and manufacturing, but to pioneer new frontiers where Australian ideas are already leading, from AI to quantum.

Australia's tech investment – defined as the sum of R&D and tech adoption spending – is currently equivalent to 3.9% of GDP. That's equivalent to $88 billion in total investment, or $3,400 per capita.[2]

Based on existing trends, this figure is forecast to fall to 3.5 per cent of GDP by 2030 due to the ongoing decline of R&D spending as a share of GDP and a lack of growth in tech adoption investment. Our modelling suggests that this decline would cost Australia around $8.2 billion dollars in 2035 alone and a total of $25.3 billion dollars between now and 2035 in foregone productivity benefits, relative to maintaining our current level of tech investment.

Higher levels of tech investment would deliver substantial benefits to the Australian economy. Lifting tech investment to 4.6 per cent in the medium scenario modelled would contribute an additional $39 billion to GDP from productivity gains in 2035. Going further to lift tech investment to 6.9 per cent would contribute an additional $167 billion to GDP by 2035.

Accelerating businesses' tech adoption has practical benefits for the businesses creating this uplift. ASX200 firms that actively invested in tech adoption were more likely to survive and grow compared to average firms across 2005-16, and small businesses actively adopting tech saw their revenue grow 3.5pp faster and their headcount grow 2.2pp faster than other small businesses according to the Office of Innovation &Science Australia.

Turning around Australia's productivity performance could be driven by higher tech investment, which will require us to address barriers to lifting R&D and tech adoption. Across both measures, we forecast that the uplift will need to be undertaken by business but Government also has an essential role to play as a policymaker and strategic investor.

Tech-driven productivity through building human capital

Improving productivity and Australians' wellbeing hinges on ensuring workers have the skills to seize opportunities created by more productive uses of capital, and we strongly support pillar 2 - to support Australia's workforce through a flexible post-secondary education and training sector.

The tech sector still faces a systemic shortage of workers, despite entry wages 32 percent above the national average, a gender pay gap half the size of comparable sectors, and

[2] Tech Council of Australia, *Lifting Tech Investment in Australia* (2024).

VET-trained workers earning 35 percent more than their peers. This disconnect underscores the need to align training and migration systems with real-time industry demand.

Part of the answer lies in understanding the pace of technological change and how it requires similarly innovative training methods and pathways. Australian workers increasingly rely on flexible, non-traditional models—employer-delivered programs, private providers and self-directed upskilling—that can adapt more quickly than formal qualifications. However, these pathways often go unrecognised by public systems and lack formal credentials to give students confidence in their choice.

The Tech Council has consistently advocated for reforms that improve the flexibility, responsiveness and recognition of these training models, including:

- **Recognition of prior learning (RPL) for unaccredited, skills-aligned training**, so workers' demonstrated capabilities count toward formal certification.
- **Incentives for hybrid and employer-led models**, such as digital apprenticeships and modular training, to ensure curricula keep pace with evolving technology needs.
- **Credit-transfer systems** that enable seamless movement between VET, higher education and work-based learning, allowing individuals to build on micro-credentials and stackable certificates as their careers evolve.

By aligning public support and certification with these flexible pathways—and pairing them with proactive skilled-migration policies that attract global talent while facilitating knowledge transfer—Australia can equip its workforce to adopt cutting-edge tools and drive productivity across every sector.

Fit-for-purpose regulation in the digital age

Smart regulation provides guardrails without dampening momentum. To secure Australia's position as a global leader in technology, the regulatory environment must be clear, coordinated and strategically aligned across the entire economy to accelerate innovation and investment (while continuing to safeguard public interests). We strongly support the PC's focus on reducing the impact of regulation on business dynamism, and creating a regulatory environment which supports innovation.

There is a significant number of regulatory reforms underway, without sufficient clarity as to scope or timing of the expected changes. This uncertainty risks stalling investment and delaying the adoption of transformative technologies, without which Australia may lose out on capturing the next wave of productivity gains.

It is therefore critical that the current regulatory agenda is proportionate and focused towards specific harms, rather than responding reflexively to uncertainty. At a minimum, this requires:

- Appropriate regulatory settings which support the growth of general-purpose technologies such as AI, quantum and blockchain that have economy-wide productivity potential;

- Cautious implementation of sector-specific regulation, which must be limited to addressing clear regulatory gaps that are likely to result in specific harms and which are aligned with reputable global standards;
- In the context of AI: (1) removing key structural barriers to innovation such as copyright restrictions which prevent use of data in large-scale computation, and (2) providing early certainty on AI regulations; and
- More broadly, adjusting Australia's tax settings to reward investment in innovation and technology (e.g. by improving the operation of ESOPs and changing depreciation schedules to improve the tax treatment of intangibles).

These steps are not radical; they simply align policy with how value is created in a modern economy. If we choose that path now—lifting R&D, rewarding adoption, equipping workers and modernising rules—Australia can keep living-standards growth on the upward trajectory that has defined us for a century.

Prosperity, productivity and technology are now a single policy conversation. The Tech Council is ready to work with Government and industry partners to turn that insight into measurable national progress.

Artificial Intelligence: A Modern Productivity Case Study

Australia faces a once-in-a-generation productivity leap: artificial intelligence. As the world races to deploy AI, our economic readiness—our investment, skills and infrastructure—will determine whether we secure its benefits. Tech Council modelling shows that, with accelerated adoption and timely reforms, Australia could add $115 billion in output and create 200,000 AI-related jobs by 2030—targets we can only achieve by preparing our economy and society today.

AI is a fitting case study of how a modern productivity agenda must weave together the PC's five pillars—capital, skills, data, innovative health regulation and clean energy—to capture tomorrow's gains before our peers do, rather than risk being left behind.

To begin with, capital and skills must advance in tandem. Capital needs to flow freely to AI startups—streamlining foreign-investment approvals—while tax settings that reward intangible investment and prudent public procurement de-risk early projects. Equally important, rapid, modular upskilling—AI bootcamps, micro-credentials and digital apprenticeships—will retrain one in three Australians within three years and unlock substantial economic gains.

At the same time, data and regulation jointly unlock AI's potential in sectors like healthcare. Data and digital infrastructure underpin every AI system. Clear, proportionate data-privacy rules aligned with global norms—and expanded digital networks—will let firms build models on high-quality, locally sourced information. Delivering AI in regulated settings such as healthcare—through faster approval of diagnostic software and pilot funding for predictive analytics—represents one of the greatest near-term productivity gains.

Finally, large-scale AI workloads demand reliable, renewable-powered data centers in key strategic locations. Investing now in cheaper, cleaner energy ensures we don't trade short-term productivity for long-term carbon targets.

A modern productivity agenda must weave together capital, skills, data, innovative regulation and clean energy if Australia is to capture AI's gains rather than watch them pass us by. The Tech Council stands ready to partner with Government and industry to make that vision a reality.