Submission to the Productivity Commission

Inquiry into Investing in Cheaper, Cleaner Energy and the Net Zero Transformation
Response to Interim Report

Sep 2025

Introduction

We welcome the opportunity to comment on the Productivity Commission's interim report. The Commission highlights three areas for reform: (1) reducing the cost of meeting emissions targets, (2) speeding up approvals for energy infrastructure, and (3) addressing barriers to private investment in adaptation.

We submit that housing, transport, and urban development are critical cross-cutting areas that must be integrated into this reform agenda. Without attention to how Australians live and travel, the productivity and emissions benefits of energy reform will be constrained. Our comments provide recommendations under three headings.

1. Decarbonising Intercity and Urban Transport (relating to Draft Recommendations 1.1–1.4)

Intercity Travel

Transport is a major emissions source, and current passenger rail options between Canberra, Sydney, and Melbourne are uncompetitive. The Sydney–Melbourne train takes 10–11 hours, while flights take 1.5 hours. As a result, the Sydney–Melbourne air route is one of the busiest short-haul corridors in the world, entrenching high emissions.

We recommend that the PC recognise **high-speed rail (HSR)** along the Canberra–Sydney–Melbourne corridor as a long-term national priority:

- **International precedents**: Japan's Shinkansen and Europe's TGV/AVE demonstrate that HSR can replace the majority of short-haul flights when travel times fall below three hours.
- **Environmental impact**: Electric HSR can reduce emissions by 70–90% per passenger-kilometre compared with flying.
- **Productivity benefits**: HSR would relieve airport congestion, stimulate regional development, and improve labour mobility across the corridor.

The Commission's framework for evaluating cost-effective emissions policies should explicitly include investment in HSR as a transport decarbonisation strategy.

Urban Transit in Medium Cities

In addition to intercity transport, cities face choices about how best to expand sustainable public transport. Many jurisdictions have considered trams or light rail, but these projects are **slow, expensive, and inflexible**. For example, light rail construction can take a decade or more, disrupt existing communities, and lock in fixed routes that may not match long-term growth patterns.

By contrast, **electric buses (EV buses)** offer a more cost-efficient and environmentally friendly option:

- **Lower capital cost**: EV bus networks require only depot charging infrastructure and modest upgrades to existing roads, avoiding the billions of dollars needed for rail tracks, power lines, and land acquisition.
- **Flexibility**: Bus routes can be easily modified as populations grow or shift, unlike trams which are fixed in place. This adaptability is especially important in medium-sized cities like Canberra.
- **Rapid deployment**: EV buses can be procured and deployed within months, delivering immediate emissions reductions, whereas tram projects often take 8–10 years from planning to operation.
- **Technology maturity**: EV buses already operate successfully in global cities. They have proven performance in range, comfort, and charging, with costs continuing to fall.
- **Environmental benefits**: Powered by renewable electricity, EV buses achieve near-zero operational emissions, while avoiding the embedded carbon costs of large-scale rail infrastructure.

For cities that do not already have established tram systems, **investment in EV buses is the efficient pathway** to deliver sustainable urban transport. This will save taxpayers money, reduce disruption, and accelerate the transition to net zero.

2. Housing Affordability, Density, and Urban Development (relating to Draft Recommendations 2.1–2.4 and 3.3)

Australia faces a housing affordability crisis, especially for young people. Current development patterns—detached houses and townhouses in new suburban estates—exacerbate this crisis and increase environmental pressures.

We recommend that the PC encourage governments to:

- **Prioritise high-density housing** in existing urban centres (medium- and high-rise apartments), especially near transport hubs.
- **Limit sprawl** by tightening planning rules for greenfield expansion and aligning infrastructure investment with infill development.
- **Integrate land-use and transport policy**, ensuring that new housing supply is linked to sustainable transport options rather than car dependence.
- **Embed resilience and energy efficiency standards** into high-rise developments, making them part of the net zero transition.

This approach reduces land and infrastructure costs, protects farmland and ecosystems, and creates more affordable, sustainable housing options in the locations where demand is highest.

3. Housing Resilience and Adaptation (relating to Draft Recommendations 3.1–3.4)

Australia's housing stock is highly vulnerable to climate risks. Two-thirds of homes were built before energy efficiency standards, leaving many households exposed to bushfires, floods, cyclones, and extreme heat.

We support the PC's proposal for a climate risk information database and recommend going further by establishing a **National Resilience Rating System for Housing**, co-designed with insurers, banks, and state governments.

- **Outcome-based ratings**: Similar to the US *FORTIFIED Home* program, ratings should measure actual resilience outcomes, not prescriptive inputs.
- **Integration with markets**: Verified ratings should be recognised by insurers (through premium discounts), by lenders (through green loan products), and by governments (through targeted subsidies).
- **Transparency and disclosure**: Ratings should be mandatory at point of sale or lease, creating incentives for investment in resilience and reducing information asymmetry in the housing market.
- **Supporting guidance**: A national technical manual of upgrades, delivered through local governments and industry bodies, would make resilience measures practical and scalable.

This approach will lower the cost of disasters, incentivise household-level investment, and align adaptation with productivity and equity goals.

Overarching Recommendation

To strengthen the draft report, the PC should adopt an integrated perspective that links housing, transport, and urban development to the net zero transition. Specifically, we recommend that the final report include:

1. **A national resilience rating system for housing** linked to insurance, finance, and disclosure (supporting adaptation).
2. **Investment in high-speed rail for the Canberra–Sydney–Melbourne corridor** as a core decarbonisation strategy (reducing emissions at least cost).
3. **Investment in EV bus networks, not new trams, for medium-sized cities** as a flexible, cost-effective, and environmentally friendly transit solution.
4. **Planning reforms to prioritise high-density urban housing** over suburban expansion (improving affordability while reducing environmental impact).

Together, these measures will:

- Reduce emissions at lowest cost,
- Improve affordability and productivity,
- Strengthen resilience to climate risks, and
- Enhance long-term wellbeing for Australian households and communities.

Annex A: Comparison of EV Buses and Trams/Light Rail

Criteria	EV Buses	Trams / Light Rail
Capital cost	Low: Requires purchase of buses and depot charging infrastructure; can use existing road networks.	Very high: Billions required for track laying, power supply, depots, and land acquisition.
Deployment time	Fast: Fleets can be rolled out within 6–18 months.	Slow: Often 8–10 years from planning to operation, with long construction phases.
Flexibility	High: Routes can be adjusted as population and demand shift.	Very low: Fixed tracks cannot adapt to changing growth or travel needs.
Operating cost	Declining rapidly as battery technology improves; lower maintenance due to fewer moving parts.	Higher long-term costs for maintaining track, overhead power, and rolling stock.
Environmental impact	Very low emissions when powered by renewables; avoids high embodied carbon of track construction.	Zero tailpipe emissions in operation, but significant embodied emissions from building infrastructure.
Urban disruption	Minimal: Uses existing roads; limited construction disruption.	High: Track construction causes years of traffic and business disruption.
Scalability	Easily scalable—new buses can be added quickly.	Poor scalability—each new route requires major investment and planning.
Technology maturity	Proven in developed countries: **Tokyo** and other Japanese cities are rolling out EV buses to improve air quality; **Oslo** is converting its fleet to all-electric by 2028; **London** already operates nearly **2,000 battery-electric buses**, plus 20 hydrogen buses, making it one of the largest zero-emission fleets in Europe.	Suitable mainly for very dense cities with extremely high demand along fixed corridors (e.g., central Melbourne or central Paris).
Suitability for medium-sized cities (e.g., Canberra, Hobart, Darwin)	Highly suitable: affordable, flexible, fast to implement, environmentally efficient.	Poor fit: too slow, costly, and rigid for cities with moderate density and changing growth patterns.