

**Productivity Commission**

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

Submitted via [online form](#)

27 August 2025

**Re: Submission to the Productivity Commission interim report: Investing in cheaper, cleaner energy and the net zero transformation**

The Affiliated Insulation Industry Coalition (AIIC) is a collective of insulation trade associations including the Australian Modern Building Alliance (AMBA), Insulation Australasia (IA) and the Insulation Council of Australia & New Zealand (ICANZ). Collectively, the AIIC represents Australian insulation manufacturers, insulation installer organisations and polymers-based insulation supply chain manufacturers.

The AIIC welcomes the opportunity to comment on this process. We commend the Commission for recognising the vital link between the National Construction Code (NCC), the delivery of climate-resilient housing, and the broader clean energy transition. Housing is fundamentally an infrastructure issue, and it is essential that the homes we build today are suited to our future energy system and climate, avoiding the need for costly and inefficient retrofits later. For existing housing stock, encouraging upgrade activity to improve resilience, performance, and compatibility with a net zero future is equally critical.

**Energy, climate and productivity**

Australia's energy future depends on delivering housing that supports our broader national goals: energy affordability, emissions reductions, and resilience. Energy efficiency underpins each of these objectives.

According to the International Renewable Energy Agency, energy efficiency is expected to contribute 25% of the world's emissions reductions to 2050 – on par with renewable energy – with electrification contributing a further 20%.<sup>1</sup> Australian research shows a similar pathway: efficiency and electrification can respectively deliver 14% and 26% of our national emissions reductions, affordably and at scale.<sup>2</sup>

To meet our 2035 emissions target and net zero by 2050 commitment, it is essential that new homes are efficient, electric, and built to draw minimal power from the grid. Ensuring Australia's NCC supports thermal performance and energy efficiency will decrease household costs, increase climate-resilience, and ultimately support economic productivity. Early adaptation, in both new build as well as measures in existing housing stock, will reduce impacts and save costs, freeing up resources for more productive uses.

<sup>1</sup> International Renewable Energy Agency (IRENA), [World Energy Transition Outlook 2022](#).

<sup>2</sup> Northmore Gordon, [Energy efficiency scenario modelling](#), 2023.

## Strong energy performance standards reduce long-term costs

High-performing buildings reduce demand on household budgets and the energy system. Good insulation and thermal performance:

- Allow right-sizing of appliances like air conditioners, batteries, and rooftop solar systems;
- Improve the impact and uptake of rooftop solar by reducing peak loads; and
- Support grid reliability and reduce the need for costly infrastructure upgrades.

These efficiencies are understood in regions such as Europe, where the European Union's Energy Efficiency First principle prioritises energy efficiency in decision-making, ensuring that only the energy truly needed is produced. This approach ensures that before expanding energy infrastructure, efficiency measures are implemented to reduce demand, optimise energy use, lower consumption, and cut emissions.<sup>3</sup> This focus on efficiency supports productivity and should be a guiding principle for action across Australia's built environment.

Poorly built homes lock in waste for decades. Without strong standards in new build, driven through the NCC, homes are more likely to be underperforming, leaky, and expensive to run, further exacerbating energy hardship already affecting 1 in 5 households in Australia.<sup>4</sup>

This waste occurs in several ways:

- **Energy waste** – higher ongoing energy bills for households and unnecessary demand on the grid, requiring additional generation and associated emissions.
- **Material waste** – the need for costly and resource-intensive retrofits to fix performance issues that could have been addressed at the outset.
- **Workforce waste** – diverting skilled trades, who are already in short supply and in high demand, to undertake remedial upgrades rather than delivering new builds, projects or essential decarbonisation work.

Avoiding these forms of waste through stronger minimum standards is more cost-effective, equitable, and sustainable than retrofitting at scale after the fact.

While the NCC can assist to ensure new build supports energy affordability, grid optimisation, emissions reductions, and resilience, there is more to be done in existing buildings. Australia's homes are responsible for around 24 per cent of overall electricity use and more than 10 per cent of the nation's total carbon emissions.<sup>5</sup> We spend about 90 per cent of our time indoors,<sup>6</sup> yet have some of the least energy efficient homes in the world.<sup>7</sup>

Observations of Australia's climate show it continues to change, with increasing temperatures, hotter extremes and changing rainfall patterns.<sup>8</sup> Given hot and cold weather already kills around 3,000 Australians each year and upgrading homes can reduce the number of deaths from heatwaves by as much as 90 per cent while improving Australians' health,<sup>9</sup> upgrading insulation and other energy performance measures in Australia's housing stock should be viewed not only

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<sup>3</sup> European Commission, [Energy Efficiency First principle](#).

<sup>4</sup> Energy Consumers Australia (ECA), [Consumer Energy Report Card: Understanding and measuring energy hardship in Australia](#), June 2025.

<sup>5</sup> [Residential buildings](#), Department of Climate Change, Energy, the Environment and Water.

<sup>6</sup> DCCEEW, [Indoor Air](#).

<sup>7</sup> American Council for an Energy-Efficient Economy (ACEEE), [International Energy Efficiency Scorecard](#), 2022.

<sup>8</sup> Climate Change in Australia, [Australian Climate Trends](#).

<sup>9</sup> [Industry-led roadmap for quality control and safety in insulation installation](#), p.4.

as an investment in emissions reduction, grid optimisation and climate adaptation, but also as a critical investment in public health and wellbeing.

## Healthy homes are productive homes

There is compelling global evidence that better building thermal and energy performance leads to improved health and productivity outcomes:

- Victoria's Healthy Homes Program (which targeted health vulnerable households) found a 10:1 return on healthcare savings compared to energy bill reductions, including almost \$900 AUD in winter healthcare savings per person.<sup>10</sup>
- New Zealand's insulation programs returned \$5–\$7 NZD in health and wellbeing benefits for every dollar invested, reducing hospitalisations, medical visits, and missed work or school days.<sup>11</sup>
- UK and Japanese studies confirm better comfort, reduced cardiovascular strain, and improved mental wellbeing and social benefits from well insulated homes.<sup>12</sup>

In Australia's varied and increasingly extreme climate, thermal performance and energy efficiency is not just a comfort issue – it is a public health imperative. Insulation not only retains warmth in winter but is the primary barrier against dangerous heat when air conditioning is unaffordable, unavailable, or inaccessible during blackouts.

A failure to address the quality of our housing is a drag on productivity, placing strain on the health system and contributing to avoidable absenteeism at work or school, due to preventable physical and mental health impacts. This ultimately undermines broader productivity and wellbeing goals.

## Fragmentation undermines productivity

Some states and territories have been demonstrating a weakened commitment to the NCC, with jurisdictions such as QLD going as far as to suggest that they might step away from energy efficiency requirements in the NCC altogether. Weakening energy efficiency standards in any jurisdiction runs counter to the national approach being pursued through the NCC. Piecemeal, state-based approaches increase regulatory complexity and compliance burden for builders and manufacturers, ultimately undermining the productivity gains they seek. It is critical that the federal government support the states and territories to remain committed to the NCC.

Australia already trails its global peers in terms of energy performance requirements for new buildings. Allowing an erosion of a consistent national trajectory risks putting us further behind.

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<sup>10</sup> Sustainability Victoria, [The Victorian Healthy Homes Program Research findings](#), 2022

<sup>11</sup> Grimes et al., [Cost Benefit Analysis of the Warm Up New Zealand: Heat Smart Programme](#) Ministry of Economic Development, 2012 and Piers et al., [Healthy Homes Initiative: five year outcomes evaluation](#), 2024.

<sup>12</sup> Gilbertson et al. 2006, 'Home is where the hearth is: Grant recipients' views of England's Home Energy Efficiency Scheme (Warm Front)', [Social Science & Medicine](#) vol. 4 issue 4, pp. 946-956, and Umishio et al., [Effect of living in well-insulated warm houses on hypertension and cardiovascular diseases based on a nationwide epidemiological survey in Japan: a modelling and cost-effectiveness analysis](#), [BMJ Public Health](#) 2024;2:e001143.

## Concluding remarks

Energy efficiency is not just a climate solution - it's a productivity strategy.

Embedding strong minimum energy performance standards in the NCC is a cost-effective way to future-proof Australia's homes. These standards reduce energy bills, improve comfort and health outcomes, and avoid the need for costly retrofits. They also make the most of public and private investments in clean energy by ensuring homes are built to optimise household and grid performance from the start. Improving the energy performance of existing homes to unlock these same benefits must also be a national priority, however, achieving this is complex and will require coordinated investment, supported by diverse incentives.

We urge the Commission to endorse consistent, ambitious energy performance standards in the NCC, alongside complementary initiatives to accelerate upgrades in existing housing. A clear, forward-looking policy, program, and regulatory framework is vital to enhancing energy performance in homes and buildings – unlocking the resulting productivity benefits.

The AIIC welcomes the opportunity to collaborate further on this matter. If you would like to organise a discussion, please contact our Advisor, Rachael Wilkinson at

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Sincerely,

Jim Hall  
Chair, Affiliated Insulation Industry Coalition