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Productivity Commission

Re: Insulation Council of Australia and New Zealand (ICANZ) submission to Interim Report: Pillar 5
— Investing in Cheaper, Cleaner Energy and the Net Zero Transformation

Executive Summary

This submission by the Insulation Council of Australia and New Zealand (ICANZ) responds to the Productivity Commission's interim report on Pillar 5: *Investing in Cheaper, Cleaner Energy and the Net Zero Transformation*. We support the interim report's recognition of housing as critical infrastructure and how well-designed climate responsive homes can contribute towards emissions reduction, climate resilience, and improved productivity.

ICANZ presents a focused case for accelerating climate-resilient housing, both in new builds and existing housing upgrades, emphasising its productivity benefits to households, the health system, electricity grid security, and the national workforce.

1. Climate-Resilient Homes and Net Zero: A Strategic Alignment

The Department of Climate Change, Energy, the Environment and Water report that Homes are core to the net zero transformation. They account for around 24% of Australia's electricity use and over 10% of total emissions ([DCCEEW](#)). Poor thermal performance in housing places stress on

the energy grid, undermines public health, and drives up living costs. Energy-efficient, climate-resilient homes reduce these burdens and align with the [Energy Efficiency First principle endorsed by Australia at COP28](#) .

For New Housing:

- High-performing building envelopes reduce peak energy demand, enabling efficiencies in grid infrastructure.
- Compliance with climate objectives of the National Construction Code (NCC), will avoid expensive housing upgrades in future decades.

For Existing Housing:

Research presented in the ICANZ 2024 report- *The Value of Insulating Existing Homes* found that significant energy savings are achievable through insulating under-insulated or uninsulated homes:

- 3.3 million homes, with an estimated energy savings of 26 petajoules per annum.
- Homes built pre-2003 average only 1.8 NatHERS stars, highlighting the upgrade imperative.

2. Benefits to Occupants and Public Health

Improved insulation significantly enhances thermal comfort, lowering health risks and supporting wellbeing.

- Poor housing is linked to cardiovascular and respiratory illnesses, depression, and increased hospital admissions (Gasparinni et al., 2015; Haddad et al., 2018).
- The Victorian Healthy Homes Program found a \$10 return in healthcare savings for every \$1 in energy savings (Sustainability Victoria, 2022).
- Heat-related deaths and health risks are projected to rise with climate change, particularly impacting the elderly, low-income households, and renters (Dignam & Barrett, 2022).

Well insulated homes moderate indoor temperatures, reducing reliance on air conditioning and protecting occupants during blackouts or heatwaves.

3. Strengthening Grid Security and Reducing System Costs

Climate-resilient housing reduces both total and peak energy demand, which supports grid reliability and reduces infrastructure costs.

- Insulated homes reduce cooling and heating load, especially during peak periods, easing strain on the electricity network (ICANZ, 2024).
- A well performing thermal envelope enables right-sizing of rooftop solar, batteries, and HVAC systems.
- Demand-side savings from improved housing performance reduce the need for costly new energy generation and transmission infrastructure (Climate Change Authority, 2024).

The value proposition mirrors Europe’s Energy Efficiency First principle: eliminate unnecessary energy demand before building new supply.

4. Supporting the Workforce and Economic Productivity

Addressing housing quality enhances workforce productivity and reduces avoidable strain on limited skilled trades.

- Cold and hot homes increase absenteeism due to illness, reduce cognitive performance, and disrupt caregiving and education (Nicholls et al., 2017).
- Upgrading existing homes at scale creates local employment and reduces future demand on trades for corrective work.
- Workforce shortages are best managed by future-proofing homes new home through energy performance objectives in the National Construction Code—not relying on mass remedial upgrades.

A national insulation certification scheme, as supported by 91% of surveyed homeowners, will ensure installation quality and build trust (ICANZ Survey, 2024).

5. Policy Recommendations

In alignment with the PC’s draft recommendations and ICANZ’s evidence base, we propose:

1. **Prioritise energy efficiency first principle in homes** as a foundational climate, energy, and productivity measure.
2. **Mandate consistent NCC implementation** of NatHERS ratings throughout the States and Territories and integrate updated climate data into future NCC reviews.
3. **Target insulation upgrades** for the 3.3 million worst-performing homes via direct rebates, prioritising low and middle income households.
4. **Ensure quality insulation installation standards** through certification requirements and inspections.

5. **Continue and expand social housing energy upgrades** through programs like Social Housing Energy Performance Initiative.

References

- ICANZ (2024). *The Value of Insulating Existing Homes*
- Climate Change Authority (2024). *Sector Pathways Review*.
- Gasparinni et al. (2015). *Mortality Risk Attributable to High and Low Ambient Temperature*.
- Haddad et al. (2018). *Indoor Air and Environmental Quality in Social Housing Dwellings in Australia*.
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