

Legislative Council Environment and Planning Committee
Submitted online

24 April 2024

Re: Inquiry into Climate Resilience in Victoria

The Affiliated Insulation Industry Coalition (AIIC) welcomes the opportunity to make a submission regarding the Inquiry into Climate Resilience in Victoria.

The 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, accredited insulation installer organisations and polymers-based insulation supply chain manufacturers.

Thermal performance for climate resilience and a successful energy transition.

Buildings with high thermal performance place the lowest demands on the grid by reducing the energy required to maintain comfortable internal temperatures, and they are better able to resist weather extremes.

Improving the thermal performance of buildings makes a significant contribution to overall grid stability by reducing demand at times of significant grid stress.

Based on today's policy settings, peak electricity demand in buildings will increase in all regions of the world in the coming decades. This rise is expected to be even more pronounced in countries with significant and expanding space cooling needs.¹ This underscores the importance of improving the thermal performance of our built environment as a matter of urgency, given the extreme heat already experienced in parts of Victoria and Australia more broadly.

Energy demand from the residential sector, particularly space heating, is the most mis-aligned with the periods of supply of low-cost renewable energy (principally solar PV). Reducing heating load through improving the thermal performance of buildings will have a significant impact on reducing the amount of new supply infrastructure such as storage.

As efficient buildings reduce the amount of energy our networks need to supply, the size – and cost – of the entire system can be lowered,² fostering a more resilient system overall.

Good thermal performance can also reduce the cost of transition at a household and business level through limiting energy waste, meaning appliances such as efficient electric heating and cooling systems can be smaller in size to achieve the same results.

¹ IEA, [More efficient and flexible buildings are key to clean energy transitions](#), 2024.

² EEC and ANZ, [Putting energy efficiency to work](#), 2023.

Victoria's poorest housing stock offers the biggest opportunity for improvement. For example, it is possible to take a Melbourne home from a 1 to 4 star NatHERS home energy rating³ through insulation alone, and deliver an energy reduction of about 65 per cent.⁴ This can have a material impact on the long-term health and comfort of the occupants, while taking pressure of the energy system during times of peak demand.

Health and comfort in a warming climate

Poor thermal performance means more energy is required to achieve and maintain a safe and comfortable indoor temperature, resulting in higher energy costs.

Given the significant adverse health effects of homes with poor thermal performance, we can reasonably expect that as the climate warms, and heatwaves become more frequent, the thermal performance of homes will become increasingly important to the health of Victorians.

The Victorian Healthy Homes Program demonstrated this effectively in vulnerable households. Each household subject to the program received a pre- and post-upgrade assessment of their home, and the upgrades administered prioritised energy efficiency and warmth.⁵

The range of upgrades included ceiling and underfloor insulation draught sealing, more efficient space heating appliances and internal window coverings. Analysis indicated that these relatively minor upgrades had wide-ranging benefits, including healthcare savings of almost \$900 per person over the winter period. In fact, for every \$1 saved in energy, more than \$10 was saved in healthcare.⁶

Programs in New Zealand⁷ and the UK⁸ have shown similar results and demonstrate a clear link between thermal performance, energy efficiency, and many areas of health.

The average star-rating of a Victorian home is just 1.8 stars,⁹ whereas the current standard for new builds is 7 stars.¹⁰

Failure to ensure a high standard of thermal performance will likely result in significant and growing costs in health and productivity as the climate warms. Further, inefficient, poorly insulated homes will face acute issues around resilience during times of heat stress, particularly when power outages are experienced. In the case of power outages, insulation is a last line of defence in maintaining a safe indoor temperature.

Many householders, particularly renters, do not have control over the thermal performance of their homes and have minimal capacity to make upgrades. These people are at risk of suffering disproportionately from the effects of climate change.

It is imperative to ensure policy and regulatory settings support climate resilience in the worst performing homes and buildings and reach the most vulnerable Victorians.

³ NatHERS, [Home Energy Ratings](#).

⁴ Sustainability House, [Residential improvements project: cost-effective energy efficiency improvements for a sample of new apartments, and existing houses and apartments in Australia](#), (2013), Pure Electric, [What does the home energy star \(NatHERS\) rating system actually mean in terms of home heating?](#), (2019).

⁵ Sustainability Victoria, [The Victorian Healthy Homes Program Research findings](#), 2022

⁶ Ibid.

⁷ Grimes et al., [Cost Benefit Analysis of the Warm Up New Zealand: Heat Smart Programme](#) Ministry of Economic Development, 2012.

⁸ Gilbertson et al., '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](#), 2006, pp. 946-956.

⁹ Sustainability Victoria, [Energy Efficiency Upgrade Potential of Existing Victorian Houses](#), 2015

¹⁰ Department of Energy, Environment and Climate Action, [7-star-energy-efficiency-building-standards](#)

The AIIC encourages the Victorian government to:

- Introduce minimum energy efficiency standards that ensure that minimum levels of insulation are in place in rental properties;
- Work with relevant stakeholders to undertake comprehensive insulation retrofits to all social housing, including public and community housing, by 2030;
- Implement programs and schemes that improve the thermal resilience of buildings; and
- Support the Commonwealth Government initiative to introduce mandatory disclosure of energy efficiency ratings at point of sale and expedite introduction into Victoria.

The AIIC offers a range of advice on how to implement these and other measures to stimulate the residential retrofit of insulation in a way that promotes quality and safety in its priorities document, [available here](#).

Should you wish to further discuss the matters raised in this submission, please contact our advisor, Rachael Wilkinson, on [redacted] or at [redacted].

Sincerely,

Jim Hall
Chair, Affiliated Insulation Industry Coalition