

Department of Energy, Environment and Climate Action  
Victoria

Submitted via Engage Victoria

25 March 2025

## **Re: Victoria's 2026-30 Climate Change Strategy**

The Affiliated Insulation Industry Coalition (AIIC) welcomes the opportunity to make a submission on Victoria's 2026-30 Climate Change Strategy.

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

The benefits of properly specified and installed insulation are closely linked to broader community advantages in both climate change mitigation and adaptation, including:

- Reducing Australia's annual emissions, potentially by 7.1 million tonnes of CO<sub>2</sub>e.<sup>1</sup>
- Improving outcomes in physical, social, and mental health by better insulating homes and workplaces. Studies have shown for every dollar invested in vulnerable households, \$7-10 in health benefits are returned.<sup>2</sup>
- Complementing efficient electrification of space heating and cooling, enabling occupants to pre-heat and cool homes with minimal energy waste, and take best advantage of household solar.
- Enabling the right sizing of space heating and cooling systems, household batteries and other infrastructure – reducing the costs of these upgrades, and the materials required to complete them.
- Promoting grid reliability by better matching supply and demand in an energy system powered by renewables.
- Making reverse cycle heating more comfortable by increasing internal surface temperatures, thus preventing cooled air creating a cold draught.
- Helping to reduce energy bills through decreased need to run heating and cooling.
- Reducing external noise, condensation, and the possibility of mould.
- Achieving appropriate fire resistance in a cost-effective manner.
- Enhancing the climate resilience of homes.

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<sup>1</sup> ASBEC, [The Bottom Line – household impacts of delaying improved energy requirements in the Building Code](#), 2018.

<sup>2</sup> Sustainability Victoria, [The Victorian Healthy Homes Program Research findings](#), 2022, and Grimes et al., [Cost Benefit Analysis of the Warm Up New Zealand: Heat Smart Programme](#) Ministry of Economic Development, 2012.

## Insulation is critical to Victoria's 2026–30 Climate Change Strategy

The Victorian climate has continued to warm since the 19th century, becoming drier in recent decades and experiencing more frequent and intense climate hazards.<sup>3</sup> It is expected that the state will experience a warmer future climate with further increases to average temperatures and more frequent and intense hot days.<sup>4</sup> Global electricity demand is on the rise, particularly due to increasing temperatures and growing space cooling needs.<sup>5</sup> Victoria faces the same challenges, highlighting the urgent need to upgrade our poorly performing building stock and strengthen the resilience of our energy grid.

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>6</sup> We spend about 90 per cent of our time indoors,<sup>7</sup> yet have some of the least energy efficient homes in the world.<sup>8</sup> In Victoria, around 50% of homes were built before there were any mandatory energy efficiency standards at all.<sup>9</sup> These homes generally have a poor standard of thermal performance making them too hot in summer, too cold in winter, and prone to health hazards such as damp. This creates an overreliance on heating and cooling appliances – which is costly, and emissions intensive.

The thermal envelope of a property is crucial to its energy performance and directly influences its emissions profile. Insulation enhances space heating and cooling efficiency, improves resilience to extreme weather, and supports the optimal sizing of solar and battery systems, all of which contribute to better climate outcomes.

Good thermal performance enhances the performance of efficient electric appliances such as reverse cycle air conditioners. Unlike traditional heaters, reverse cycle air conditioners when used for heating will expel warm air (rather than hot) and are generally placed nearer to the ceiling. This means if the building is poorly insulated, the surface temperatures are low and heat losses and temperature drops are high. The cooled air from these surfaces will flow close to the floor which creates a “wind chill” effect, leading to uncomfortable, cold, and dissatisfied occupants.<sup>10</sup>

Another area where thermal performance upgrades compliment other measures is alignment with renewables. In particular, residential energy demand is often misaligned with the availability of low-cost renewable energy, particularly solar PV. Improving thermal performance can help balance heating and cooling loads, addressing this mismatch. This not only improves cost and comfort for households with solar, but also alleviates pressure on the grid, fostering a more resilient energy system overall.

The European Union's Energy Efficiency First principle prioritises energy efficiency in decision-making, ensuring that only the energy truly needed is produced. Before expanding energy infrastructure, efficiency measures should be implemented to reduce demand, optimise energy use, lower consumption, and cut emissions.<sup>11</sup>

<sup>3</sup> DEECA, [Victoria's changing climate](#), 2024.

<sup>4</sup> Ibid.

<sup>5</sup> IEA, [More efficient and flexible buildings are key to clean energy transitions](#), 2024.

<sup>6</sup> [Residential buildings](#), Department of Climate Change, Energy, the Environment and Water.

<sup>7</sup> DCCEEW, [Indoor Air](#).

<sup>8</sup> American Council for an Energy-Efficient Economy (ACEEE), [International Energy Efficiency Scorecard](#), 2022.

<sup>9</sup> Sustainability Victoria, [Victorian homes to help power our energy transition](#), 2024.

<sup>10</sup> The Conversation, [Replacing gas heating with reverse-cycle aircon leaves some people feeling cold. Why? And what's the solution?](#) 2023.

<sup>11</sup> European Commission, [Energy Efficiency First principle](#).

Insulation is key to this approach, as it directly reduces the need for additional energy to maintain comfortable indoor temperatures. Combined with appropriate window coverings, shading, and draught-proofing, insulation in walls, ceilings, and floors reduces heat loss in winter and heat gain in summer, requiring less energy for heating and cooling. This reduces energy bills and relieves pressure on the grid, particularly during peak demand. Managing peak demand is especially critical during the winter where space heating is a large contributor to both gas and electricity demand.<sup>12</sup>

The connection between health, climate, and our building stock should not be underestimated.

Numerous studies show a direct link between thermal performance and occupant health. The Victorian Healthy Homes Program demonstrated that relatively minor upgrades, including insulation and draught proofing, saved nearly \$900 per person in healthcare costs during winter, with every \$1 saved in energy yielding more than \$10 in healthcare savings.<sup>13</sup>

In New Zealand, similar insulation upgrades provided NZD \$7 in benefits for each dollar spent, largely due to improved health outcomes.<sup>14</sup> In Japan, living in well insulated homes has been linked to fewer cardiovascular issues and better cognitive health.<sup>15</sup>

A growing number of studies also suggest that the reduction of thermal discomfort and anxiety related to fuel poverty or bill strain in energy efficient homes leads to improved mental and social health outcomes.<sup>16</sup> This is especially relevant to economically and socially disenfranchised people, who disproportionately experience energy poverty.<sup>17</sup>

Despite these benefits, energy efficiency and emissions reduction programmes and interventions from government in recent years have typically focused on appliances, while thermal performance has largely been overlooked. As such, Victoria's many poorly performing homes continue to face problems such as unhealthy and uncomfortable indoor air temperatures, overreliance on costly and emissions intensive heating and cooling solutions and placing avoidable strain on the energy grid.

These problems will only intensify in the coming years.

Observations of Victoria's climate show it continues to change, with increasing temperatures, hotter extremes and changing rainfall patterns.<sup>18</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>19</sup> retrofitting insulation and other thermal performance measures in Victoria's housing stock could be viewed not only as an investment in emissions reduction and climate adaptation, but also as a critical investment in public health and wellbeing.

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<sup>12</sup> ACEEE, [Building electrification: programs and best practices](#), 2022, p. 34.

<sup>13</sup> Sustainability Victoria, [The Victorian Healthy Homes Program Research findings](#), 2022, p.6.

<sup>14</sup> Grimes et al., [Cost Benefit Analysis of the Warm Up New Zealand: Heat Smart Programme Ministry of Economic Development](#) (2012).

<sup>15</sup> 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](#), 2024.

<sup>16</sup> EEC and ANZ, [Putting Energy Efficiency to Work](#), 2023, p. 24.

<sup>17</sup> Brotherhood of St Laurence n.d., [Affordable, clean energy](#).

<sup>18</sup> DEECA, [Victoria's changing climate](#), 2024.

<sup>19</sup> [Industry-led roadmap for quality control and safety in insulation installation](#), p.4.

As Victoria develops its 2026–30 Climate Change Strategy, addressing the thermal performance of the built environment must be a priority. Our high-level recommendations<sup>20</sup> to improve outcomes in Victoria include:

- **Adopt the Energy Efficiency First Principle:** Prioritise energy efficiency in decision-making regarding energy systems, building, and retrofitting, aiming to reduce energy demand before expanding infrastructure. This creates significant emissions reduction.
- **Include insulation in government programs:** Incentivise insulation uptake, ensuring proper training, product certification, and compliance monitoring to underpin the work.
- **Insulate social and community housing:** Position insulation as a key component in social and community housing upgrades and ensure that all existing housing stock in these categories are upgraded by 2030.
- **Regulatory and compliance measures:** Strengthen regulations and enforcement around insulation installation to ensure safety and effectiveness. This should include the introduction of a mandatory minimum rental standard for insulation, and requirements for workforce training and [certification](#) (or equivalent) of installers.

The AIIC welcomes the opportunity to collaborate further with government on this matter. If you would like to organise a discussion, please contact our Advisor, Rachael Wilkinson at [Rachael.Wilkinson@eec.org.au](mailto:Rachael.Wilkinson@eec.org.au).

Sincerely,

Janine Strachan  
Chair, Affiliated Insulation Industry Coalition

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<sup>20</sup> The AIIC's detailed policy statement is [available here](#).