

Improving the health and efficiency of buildings with insulation

Improving the thermal performance of buildings – particularly through upgrades such as insulation – will play a key role in improving Australia’s energy performance: reducing emissions; reducing energy supply infrastructure stresses and costs; and saving money for businesses and consumers. Insulation plays a fundamental role in reducing the energy consumption and peak energy demand of homes and commercial premises while also enhancing demand flexibility, and will be essential to accelerating the transition to net zero, futureproofing and enhancing the climate safety of Australian homes.

More than eight million Australian homes were built prior to mandatory minimum energy efficiency requirements, and a substantial portion of these homes lack basic measures to ensure thermal comfort and safety such as insulation. Many of these homes are occupied by Australia’s most vulnerable people, and the poor performance of these dwellings presents long-term risks to health, comfort and welfare of their inhabitants. A coordinated residential rehabilitation process is needed to address this issue.

The Affiliated Insulation Industry Coalition (AIIC) is a collective of insulation trade associations including the Australian Modern Building Alliance (AMBA), Insulation Australasia (IA), Insulation Council of Australia & New Zealand (ICANZ) and The Insulation Academy (TIA), each representing different product types and installation services. The collective activity of this group is informed by the 2021 [Roadmap for quality control and safety in insulation installation](#), which was developed and signed by over 40 organisations.

The AIIC agree that the below suite of recommendations can raise and protect the living standards of Australians by making homes healthier and cheaper to run, while accelerating the transition to net zero, and enhancing their climate safety.

Recommendations in this document are intended to be practically implementable in the near to mid-term, and provide a solid foundation for increasing the safe installation of quality insulation product in Australian homes and businesses.

Recommended actions – programs and procurement

Strong industry training and independent third-party product certification options exist to give governments confidence that programs including insulation can proceed safely.

Programs to encourage insulation retrofit in homes

Ensuring that our homes are healthy, affordable and decarbonised is a national infrastructure issue that requires a coordinated approach. Homes are not short-lived consumer goods – they generally last for decades and have dozens of occupants over their life-span.

Energy efficiency schemes in New South Wales, Victoria, South Australia and the Australian Capital Territory have delivered substantial savings for consumers right across the energy system through incentives for energy efficiency upgrades. However, at present, only the Australian Capital Territory and Tasmania provide support to increase insulation uptake.

Households and businesses in all jurisdictions would benefit from programs and schemes that incentivise the deployment of ceiling, wall and floor insulation as an energy efficiency technology.

Governments are by no means limited to adopting similar programs to those already tested in the states and territories, however existing knowledge and experience does provide governments with opportunity to adopt, adapt and streamline. Recent activity that could be built on is the [Energy Saver Loan Scheme](#) in Tasmania and the [Victorian Healthy Homes Program](#). There are also many learning opportunities available from energy efficiency programs overseas. Common characteristics of these programs include a focus on social and low socioeconomic housing, priority for whole of home solutions, training and certification requirements for installers, and product and service coverage through long term guarantees.

1. Governments should implement programs and schemes that increase the uptake of insulation.

These programs should include the following characteristics:

- **Training:** installers contracted to undertake insulation work hold an EEC Certified Insulation Installer certification, or equivalent;
- **Product:** insulation materials used have independent third-party building product certification through the Australian Building Codes Board administered [CodeMark](#) Certification Scheme, or similar JAS-ANZ governed certification scheme;
- **Application:** fit for purpose application of products supported by appropriate warranties;
- **Electrical safety:** Electrical safety inspection undertaken by a licensed electrician prior to installation;
- **Compliance:** programs and schemes include compliance activity such as independent audit, with material consequences for non-compliance; and
- **Stability:** programs and schemes run for steady, sustained periods of time to avoid goldrush scenarios that create conditions for non-certified installers and non-confirming product to flood the market.

Social housing

The long-term welfare of vulnerable households is best served by improving the health and comfort of their homes, and providing them support to reduce energy demand (therefore cost) through energy efficiency upgrades – this includes making sure that all social housing, including public and community housing, is appropriately insulated.

2. Governments should commit to working with relevant stakeholders to undertake comprehensive insulation retrofits to all social housing, including public and community housing, by 2030:

- At minimum, insulation in public and community housing should be upgraded in line with National Construction Code 2022 climatic zone standards;
- Wall and floor insulation should be included in retrofits, with consideration for factors such as climate and construction type;
- All installers contracted to undertake insulation work should be required to hold an EEC Certified Insulation Installer certification, or equivalent;
- Insulation materials used should have independent third-party building product certification through the Australian Building Codes Board administered [CodeMark](#) Certification Scheme, or similar JAS-ANZ governed certification scheme; and
- Fit for purpose application of products supported by appropriate warranties; and
- Electrical safety inspection undertaken by a licensed electrician should take place prior to installation.

Procurement

Procurement Rules are designed to ensure the Government and taxpayers get value for money. There is a substantial body of evidence to support that insulated properties reduce running costs and provide additional value for occupants such as increased comfort and better health outcomes.

3. Governments should review procurement guides and guidelines to ensure that:

- All installers contracted to undertake insulation work are required to hold an EEC Certified Insulation Installer certification, or equivalent;
- All insulation materials procured should have independent third-party building product certification through the Australian Building Codes Board administered [CodeMark](#) Certification Scheme, or similar JAS-ANZ governed certification scheme;
- Fit for purpose application of products supported by appropriate warranties; and
- Electrical safety inspection undertaken by a licensed electrician should take place prior to installation.

Recommended actions - regulatory interventions

While it is important that we do not impose unnecessary regulatory burden on businesses, individuals and community organisations, it is clear that more regulatory intervention and compliance activity related to insulation is needed.

Key reasons to increase regulatory and compliance measures around insulation include:

- Stimulation of residential rehabilitation activity in millions of poorly performing homes;
- Keeping insulation installers safe on the job;
- Protecting the community through reducing the prevalence of non-conforming product and poor-quality installation work; and
- Efficient, cost-effective delivery of wider government and societal goals such as decarbonisation, the climate proofing of housing infrastructure, lowering energy prices and increasing health and comfort.

4. Governments should consider regulatory interventions to stimulate residential rehabilitation, keep installers safe, and improve standards of quality and conformance.

Interventions should include the following characteristics:

- **Training:** installers contracted to undertake insulation work should hold an EEC Certified Insulation Installer certification, or equivalent;
- **Product:** insulation materials used should have independent third-party building product certification through the Australian Building Codes Board administered [CodeMark](#) Certification Scheme, or similar JAS-ANZ governed certification scheme;
- **Application:** fit for purpose application of products supported by appropriate warranties;
- **Electrical safety:** electrical safety inspection undertaken by a licensed electrician should take place prior to installation;
- **Compliance:** independent audits and compliance activity should be undertaken, with material consequences for non-compliance and repeated non-compliance; and
- **Consistency:** governments should collaborate with other jurisdictions to ensure interventions across the country are as consistent as possible to avoid duplication of effort and unnecessary burden and regulatory confusion for industry.

Minimum rental standards

Many renters around Australia live in poor quality housing that is expensive to heat/cool and are not suitable to help maintain health and comfort. The introduction of minimum energy efficiency standards that ensure that insulation is in place in rental homes will help improve energy performance, increase thermal comfort, reduce greenhouse gas emissions, and contribute to climate change resilience.

5. Governments should introduce minimum energy efficiency standards that ensure that insulation is in place in rental properties:

- At minimum, insulation in rental properties should be upgraded in line with National Construction Code 2022 climatic zone standards;
- Wall and floor insulation should be included in retrofits, with consideration for factors such as climate and construction type;
- All installers undertaking this insulation work should hold an EEC Certified Insulation Installer certification, or equivalent;
- All product used should have independent third-party building product certification through the Australian Building Codes Board administered [CodeMark](#) Certification Scheme, or similar JAS-ANZ governed certification scheme; and
- Fit for purpose application of products supported by appropriate warranties; and
- Electrical safety inspection undertaken by a licensed electrician should take place prior to installation.

Mandatory residential energy efficiency rating disclosure

There is a case to require the disclosure of residential energy efficiency ratings when homes are sold. Mandatory disclosure of energy efficiency ratings helps prospective purchasers understand the often-hidden energy performance of buildings, and helps build the case for action to improve this performance. Similar schemes have been implemented in other countries since the 1980s. In 2010, the Australian Government introduced a requirement for energy efficiency ratings to be disclosed when large offices are advertised for sale or lease, and this has played a major role in the energy use per square metre in rated office buildings declining by [over 50 per cent](#) between 2011 and 2022. The implementation of mandatory disclosure of energy efficiency ratings for homes at the time they are sold could stimulate further residential rehabilitation activity for homes outside of rental and social housing markets.

6. Governments should introduce mandatory energy rating disclosure

- The energy efficiency ratings of residential buildings should be disclosed at point of sale, using a universal, nationally-consistent rating scheme.

Use of digital tools to increase compliance and enforcement systems

Installers around the country are regularly witnessing examples of poorly installed insulation in properties built after the introduction of minimum standards. It is clear further compliance activity is required in new build to ensure that insulation is installed properly.

The construction industry has raised concerns regarding the cost of increased compliance activity associated with insulation in the past, however there are now a host of digital tools available that could be used by building inspectors and certifiers as a low-cost approach to improving compliance.

7. Governments should improve general compliance and enforcement systems for installation of insulation in new build:

- Undertake a review to ensure insulation requirements are clearly specified in building documentation;
- Consider how digital tools (such as time-and-location stamped photographs) could be better utilised to cost-effectively incorporate increased quality checks of insulation installation in new build; and
- Support industry groups to offer funded training programs on working with and around insulation at the apprentice and certified tradesperson level.