

# Addressing weak performance: Roadmap for better quality Australian homes



Based on AHURI Final Report No. 426: A national roadmap for improving the building quality of Australian housing stock

## What this research is about

**This research provides a roadmap for implementing best-practice housing standards regulation in Australia so as to address problems associated with aged and ill-performing housing stock in both the owned and rented sectors.**

## The context of this research

Housing that is in poor physical condition has direct negative health impacts for occupants and is more expensive to run. As an entire stock, it has important implications for the nation's ability to mitigate and adapt to climate change.

The Australian National Construction Code (NCC) has prescribed energy efficiency standards for newly built and substantially renovated homes. Most new Australian homes (82%) are designed to meet, rather than exceed, these minimum requirements, which are low by international standards. Houses built before 2003 are subject to almost no regulation in terms of minimum standards for quality, condition or environmental performance, with the exception of some minor requirements for rental housing, and it is estimated that by 2050, there will still be seven million Australian homes that don't meet NCC energy efficiency standards.

## The key findings

### **Australia's data resources on housing standards are incomplete**

Australia's data resources on housing standards are incomplete in both focus and what is measured. Many data resources only provide insight into the housing conditions of a specific population (such as First Nations people or social housing tenants) or geographic location. The criteria that is measured is also piecemeal, such as focusing on one criteria only like energy use or overcrowding.

No one existing dataset is ideal in providing information on the state of housing in Australia, and although all the available datasets can show a picture of current Australian housing conditions, there are significant gaps.

### **Census data provides a good data overview of Australian housing stock but lacks detail**

The Census of Population and Housing includes all Australian homes and provides a good data overview across number of dwellings, bedrooms and tenure. It shows most homes were located within New South Wales (NSW) and Victoria (VIC), and within metropolitan regions. Whilst the proportion of apartments is increasing, most Australians lived in detached homes, which comprised over 60 per cent of housing stock. The majority (73%) of freestanding homes were owned or mortgaged, whereas most apartments (59%) were rented. The majority of Australian homes were mortgaged (33%) or owned (30%), with rentals comprising 30 per cent of the housing market.

### **70% of homes have some building quality problem**

The Australian Housing Conditions Dataset reveals that whilst more than half of homes were reported as being of good or excellent quality, 70 per cent of homes surveyed had some building quality problem. Cracks in the walls were the most common issue (44%), followed by mould (35%) and plumbing issues (27%).

## Australian environmental performance standards weaker than international counterparts

Australian environmental performance standards are considerably weaker than international counterparts. This research project's review of the Australian policy landscape reveals fragmented and, in some cases, ineffectual regulation of housing standards, including environmental performance. A multi-pronged strategy will likely be needed to develop fit-for-purpose housing standards policy in Australia. The current requirement of a seven-star rating for new homes is below best practice. A nine-star standard is required to eliminate mechanical heating and cooling in line with the requirements of a low-energy house.

While voluntary policies (and standards) are important for encouraging leadership and innovation, they only improve a small proportion of the housing stock. In contrast, mandatory approaches are needed to lift the standard of most homes. An example that aims to improve information about housing quality is compulsory disclosure of the energy efficiency of a home at point of sale or lease. The mandatory disclosure requirement in the ACT means the territory not only has the highest level of energy efficiency improvements to existing owner-occupied dwellings, but that for each half-star improvement in the Energy Efficiency Rating, vendors achieved house prices increased by 1.23 per cent in 2005 and 1.91 per cent in 2006.

## NatHERS measures energy efficiency, shows houses are becoming more energy efficient

The Nationwide House Energy Rating Scheme (NatHERS) provides energy efficiency ratings for new dwellings and is administered by the Commonwealth Government on behalf of the states and territories. The NatHERS dataset is limited to homes built since 2016. From the available data, significant improvement can be seen in homes built in the past five years, when compared to existing homes. Renovated homes also showed significant improvement compared to existing homes. This indicates that there is likely to be a majority of very energy inefficient homes in Australia's current housing stock as older homes are in poorer condition than newer homes, and older homes are more likely to be cold homes.

## The National Construction Code (NCC) sets minimum standards

The NCC is the national code, legislated by the states and territories, that sets the minimum standard for all buildings, building elements, and plumbing and drainage systems. The 2022 NCC update increased the minimum level of thermal performance required for new houses from six to seven stars under NatHERS. It also introduced universal

housing design based on the Livable Housing Design Standard (Silver Level), which aims to improve housing for residents and support ageing in place. However, the states and territories are responsible for transitioning to the 2022 Code, and many have delayed its adoption or only partially adopted the increased requirements.

The NCC minimum performance requirements for energy efficiency (and now Livable Housing Design Standard requirements) are certificated at the building approval stage and there is no testing or certification on completion of construction.

## 'Trajectory for Low Energy Buildings' has set general targets for the Australian building sector

The National Energy Productivity Plan (NEPP), endorsed by the former Council of Australian Governments (COAG) Energy Council in 2015, aims to enhance Australia's energy productivity by 40 per cent from 2015 to 2030. As part of the NEPP, COAG produced the 2018 Trajectory for Low Energy Buildings (and subsequent Addendum in 2019 which considerably expanded the scope of activities). The Trajectory outlines measures to achieve zero energy (and carbon) ready buildings that are thermally and energy efficient. It also highlighted the need for action to improve energy efficiency in existing buildings

Most actions of the 2018 Trajectory were included in the 2022 NCC update, including expanding the energy efficiency objective; adding an energy and carbon budget for residential buildings; and requiring residential buildings to be able to accommodate on-site renewable energy generation and storage and electric vehicles. But the progress on the additional activities outlined in the 2019 Addendum is unclear.

An updated Trajectory is under development with an increased emissions reduction ambition, with the goal of a low energy and net zero emissions building sector by 2050, and 43 per cent emissions reduction by 2030. The Trajectory has been expanded to include embodied carbon.

## State and Territory residential tenancy, housing, building and related Acts

Most of the states' and territories' **Residential Tenancies Acts** have the objective of regulating the relationship between lessors and tenants. Generally, the Acts specify some level of basic habitability (including, in some instances, sufficient heating) and cleanliness. The ACT Act requires disclosure of energy efficiency rating if an assessment has been undertaken and sets a minimum standard for insulation. The VIC Act sets a minimum energy efficiency standard for space heating. No other Acts contain specific requirements regarding building energy efficiency or environmental performance. The state of Victoria is

currently considering the inclusion of a greater breadth of minimum energy efficiency standards within their Act.

**Housing Acts** across the jurisdictions relate to the regulation and provision of public, community or 'affordable' housing. Objectives of the Acts are mainly centred on the administration, governance and provision of housing and housing related services, and are largely unrelated to the physical quality or conditions of housing.

The states' and territories' Building Acts mainly regulate building work (licenses contracts, insurance), though some do specify building standards. The ACT Act sets out requirements for Energy Efficiency Certificates.

The ACT **Civil Law Act** 2003 provides for the mandatory disclosure of the energy efficiency rating of a property for sale, while the **SA Housing Improvement Act** 2016 sets out minimum housing standards, which, if not met, can result in a property being listed on the Substandard Property Register and subject to rent control. The VIC **Gas Substitution Roadmap** requires all new homes requiring a planning permit to be all-electric.

Some jurisdictions offer rebates or interest-free loans to specific households. Currently, most available rebates and loans are focused on transitioning households to renewable energy.

## Voluntary home energy and accessibility rating tools

Two government-accredited, voluntary rating tools exist to measure the energy performance of existing residential buildings.

The **Residential Energy Efficiency Scorecard** was created by the Victorian Government to provide a rating for existing homes, as well as information such as running costs, greenhouse gas emissions and ratings for fixed appliances. The Scorecard is used nationally and is being integrated into NatHERS.

The **National Australian Built Environment Rating System (NABERS)** was created to provide ratings for existing commercial buildings. While NABERS ratings are mandatory for many commercial buildings, voluntary NABERS tools have been added, including for apartments, retirement living and residential aged care complexes.

The Green Building Council Australia, an Australian non-profit organisation that works closely with governments, has developed Green Star ratings. There are five separate Green Star tools for rating the sustainability of buildings, precincts, interiors, new homes and existing buildings.

The LHA Livable Housing Design Standard (LHDS) provide specifications for homes that are accessible, easy to live in, and adaptable to changing life stages. Homes can be certified against the LHDS to the LHA Silver, Gold or Platinum levels, with design and final-as-built certification.

## International case studies

### Energy Performance Certificates in the UK

Since 2008, Energy Performance Certificates (EPCs) have been a mandatory requirement for all dwellings sold or rented in the UK. An EPC is a report on the 'calculated energy performance of a specific building'. As a source of data it can 'lever' other policy measures such as financial incentives and minimum standards, improve energy planning and strategic decision-making between local and state governments and be used by private industries in better shaping their products and services, such as energy counseling or building retrofitting.

### The National Healthy Housing Standard in the US

The National Healthy Housing Standard connects the housing and public health sectors by providing a comprehensive guide for a wide range of stakeholders, including governments, NGOs, public health and housing authorities and private organisations, in how to improve housing conditions. It also seeks to fill gaps in federal, state and local building regulations.

### Healthy Housing Index in Aotearoa New Zealand

The Healthy Housing Index (HHI) in Aotearoa New Zealand has two purposes: to improve decision-making power for those living in, owning and/or managing dwellings; and to provide 'a robust basis for policy development'. A core aspect of its success was that it embraced and was therefore enhanced by cross-sector collaboration. It is unique in that it was formed from years of independent, science-based research, backed by a collection of practical studies.

## Australian housing improvement needs policy action

To improve the building quality of Australian housing stock, it is important to investigate how and why governments make policy about the quality of Australian housing stock.

It is clear that there are many pressures on government and that there are many sides of housing debates where opposing views use research evidence to promote their desired outcome.

Change is difficult because of both the challenges of getting government attention and the opposing pressure from strong property industry lobbyists, but it is not impossible. One of the sharp lessons from the Aotearoa New Zealand case study is that having research evidence is not enough. The key elements identified for change include:

- building a convincing narrative to tell a plausible story of a social problem (including coverage of the evidence in the popular media)
- building a coalition of support
- the coalition needs to ensure that institutional measures are implemented.

The example of the Livable Housing Design Standard case study showed a different pathway to change. The alliance of community sector actors was able to change strategy and generate changes to the NCC. An important tool for change was academic research commissioned to counterbalance the views of an industry consulting firm. The leadership of the campaign for change was very determined and kept pressing for change despite the numerous setbacks.

## What this research means for policy makers

### A national strategy to improve housing needs three regulatory mechanisms

The principal finding from this research is that a national strategy to improve residential building quality should be developed and include the following three regulatory mechanisms.

#### 1. Improved performance standards for new houses

Maintaining and enforcing appropriate housing standards for new houses through the National Construction Code represents an important mechanism for ensuring that Australia's future housing stock is fit-for-purpose throughout its lifetime.

#### 2. Mandatory disclosure of dwelling energy performance

This could enable:

- improved market function on the provision of better consumer information about the performance of houses offered for sale or lease
- accountability and transparency in the performance standards of public and community housing

- routine data collection and monitoring of performance standards across the entire housing stock.

A mandatory disclosure scheme could also act as a mechanism for increased minimum performance standards over time, as well as a conduit for government retrofit or remediation programs targeting lower performing dwellings (i.e. following the example of EPCs in the UK).

### 3. Minimum housing standards for the rental sector

Providing a safer, more efficient and healthier environment for renters to live in is an important element of Australian housing policy. A strong narrative needs to be built around the benefits of such a change for tenants, for the health sector, and energy conservation. There should be detailed negotiations with landlord groups around the sorts of changes that will be needed and their phased introduction.

#### An effective national strategy could also include:

- coordinated and nationally driven data infrastructure to shape policy responses and monitor progress into the future
- transparent and proactive governance of regulatory mechanisms (including organisations such as the Australian Building Codes Board)
- more appropriate accounting methods of the benefits provided by improved housing standards
- rigorous independent building compliance and enforcement processes need to be implemented, particularly in light of the large number of defects reported in recent surveys of apartment buildings.

## Methodology

This research analysed Australian housing data on the quality, condition and environmental performance of housing; reviewed the Australian policy landscape; considered case studies of international precedents from the United Kingdom (UK), the United States (US) and Aotearoa New Zealand; and interviewed stakeholders from government, non-government organisations, industry and academia.

#### To cite the AHURI research, please refer to:

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