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# Measuring housing affordability: Scoping the real cost of housing



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# Executive summary

## Key points

- This research examines the housing-energy-transport nexus with a focus on housing quality (performance and comfort) and location in relation to housing affordability.
- Policies supporting affordability across the housing-energy-transport nexus vary by jurisdiction and intended target cohort.
- While nationwide improvements to new dwelling standards are promising, this research shows varying degrees of application across the states and territories.
- Raising the minimum standard of existing dwellings, including rental housing, is challenging without the right balance of landlord incentives and tenancy rights.
- Measures supporting the uptake of renewable energy systems tend to favour homeowners and landlords.
- Energy hardship mitigation measures prioritise short-term bill relief over addressing the core drivers of material deprivation.
- Few measures apply a spatial focus to housing affordability—and even fewer are targeted toward private renters.
- Transport-related initiatives target very-low-income cohorts through concession schemes, or higher-income cohorts through zero-emission vehicle incentives.
- The case-study findings offer a more holistic framework for measuring housing affordability in Australia.

Housing affordability is largely understood as a relationship between housing costs and household income. At its core, housing affordability is tied to the principle that households should have access to an adequate standard of housing without the cost burden impacting household wellbeing and their non-housing expenditure (Hulchanski 1995). Normative measurements of affordability include:

- the housing cost-to-income ratio approach—where the ratio of housing expenditure to household income does not exceed a specified standard (Yates 2016)
- the residual income or expenditure approach—where a housing affordability problem is evident when insufficient income remains for essential needs after housing costs are met (Burke, Stone et al. 2011).

Across Australia, policy makers typically apply a variation to the ratio approach as a measure of 'housing stress', which is signified in Australia as households in the bottom 40 per cent of the income distribution spending more than 30 per cent of their income on housing (Pawson, Milligan et al. 2020). This measure has been dubbed the 30:40 rule (Yates and Milligan 2007).

Yet, accurately measuring housing affordability—and identifying housing affordability problems in practice—remains challenging given the variables affecting households in myriad and disproportionate ways (Haffner and Hulse 2021). For example, the evidence-base shows that normative housing affordability measures remain insensitive to factors such as household size, composition and formation, housing tenure, quality, and locational and neighbourhood characteristics (Leishman and Rowley 2012).

Lower-income households pressured to consume housing in under-serviced, often outer-urban locations with limited transport access, typically commit greater costs and time to commuting and experience spatial dislocation from social and economic networks (Arunachalam, Smith et al. 2020; BITRE 2015; Makarewicz, Dantzer et al. 2020; Sabari, Wu et al. 2017). At the same time, lower-income households are also more likely to make difficult trade-offs between their energy consumption needs and meeting other essential household expenditures—which can result in energy hardship and adverse health effects (Brown, Soni et al. 2020; Chester 2013; Nicholls and Strengers 2017).

Despite energy and transport expenditure representing a considerable proportion of total household spending (Daniel, Moore et al. 2020; Sabari, Wu et al. 2017), and being directly related to overall housing affordability, the combined costs and implications are rarely considered across housing policy literature. By extension, the locational and dwelling quality aspects of housing affordability remain overlooked, despite constituting fundamental attributes of the housing bundle and household wellbeing. This scoping project responds to this research and policy gap, with the aim of establishing a framework for a more comprehensive, contemporary and nuanced assessment of housing affordability in consideration of the multiple and complex trade-offs households make in their housing decisions.

## Key findings

### Policy to support affordability across the housing-energy-transport nexus

A range of policy initiatives was identified that respond to housing affordability issues relating to housing quality, energy hardship and poverty, as well as locational and transportation disadvantage. The initiatives examined vary by jurisdiction and intended target cohort.

### Minimum standard of housing

Although recent changes to the National Construction Code (NCC) demonstrate a significant policy shift to improve dwelling quality, the voluntary application of these changes across the states and territories has led to variations in minimum performance requirements across Australia. Moreover, as the NCC applies explicitly to new or substantially renovated dwellings, the standard of housing for households in existing dwellings is not likely to improve without additional, cross-tenure policy measures. Despite numerous Council of Australian Governments (COAG) Energy Council agreements to make existing buildings more energy efficient (Department of Climate Change, Energy, the Environment and Water [DCCEEW] 2023a; 2023b), our analysis shows that few jurisdictions have committed to implementing an improved minimum standard of housing for existing private rental properties. The Australian Capital Territory constitutes the only jurisdiction to mandate energy-efficiency disclosure requirements for the sale or leasing of residential buildings.

### Energy efficiency

Our analysis identified a range of largely non-means-tested incentives, programs and supporting initiatives that seek to facilitate the uptake of renewable energy systems, thermal performance improvements and energy-efficient appliance upgrades. While some schemes are targeted toward lower-income households and social and private renters, most are geared toward property owners. Some jurisdictions have implemented schemes specifically designed to incentivise private landlords to improve the energy performance of privately rented dwellings, and a recent joint-government investment in energy performance upgrades (DCCEEW 2023d) is anticipated to improve the quality of social housing across Australia.

### Energy hardship

A wide range of schemes offer financial assistance, mediation and advice to eligible households on very low incomes to mitigate the extent of energy hardship. This was particularly notable under the National Energy Bill Relief Fund (NEBRF) initiated in response to a growing cost-of-living crisis. Few measures have been implemented to address the root drivers of energy hardship, with the exception of schemes like the cross-government Community Solar Banks initiative. Recent increases to Commonwealth Rent Assistance (CRA) may provide some relief but do little to address issues relating to the costs of running energy-inefficient and thermally inefficient housing.

### Locational disadvantage

Few measures apply a spatial-specific focus to addressing housing affordability issues. Our review identified South Australia as the only jurisdiction in Australia to implement a mandatory inclusionary zoning requirement that has effectively delivered well-located social and affordable housing. Soft affordability targets exist in New South Wales through a voluntary inclusionary planning framework, and to some extent in the Australian Capital Territory through an Indicative Land Release Program. Few key-worker housing programs, which attend to the spatial significance of housing affordability, have been initiated across Australia.

### Transportation disadvantage

Most strategic infrastructure planning documents reviewed indicated commitments to improving accessibility, connectivity and sustainability throughout Australia's built environment. Here, Western Australia's Metronet scheme illustrates how governments are aiming to promote urban efficiency and to better connect housing with employment precincts through high-frequency public transport systems, as well as mixed-use and mixed-tenure housing developments around key transport hubs. Meanwhile, transportation hardship measures are typically geared towards very-low-income households. Few initiatives target low-to-moderate-income households with significant transportation expenditure.

## Measuring the housing-energy-transport nexus

The various studies and research methodologies analysed in this report collectively offer a more comprehensive and refined understanding of housing affordability beyond the normative measure of housing stress through the 30:40 housing cost-to-income ratio. When implemented, these methodologies can provide compelling evidence about the need to improve housing conditions, including:

- improving energy-efficiency and thermal performance
- addressing and mitigating experiences of energy hardship and poverty
- reducing spatial patterns of residential exclusion and disadvantage in relation to proximity and accessibility of essential resources and services.

Given the accessibility of most datasets used, there is great potential to utilise these methodologies at a larger scale and greater frequency—including variation, adaptation and amalgamation.

## Quality dimensions of housing

Through analysis of the newly developed Australian Housing Conditions Dataset (AHCD), together with supplementary data collection methods, Daniel, Moore et al. (2020) provided valuable insights into the living conditions and experiences of households facing energy hardship. Their research provides insights into the implications of living in substandard housing, and points to the need for a universally applied definition of safe and healthy housing standards across Australia. This methodology underscored the need for policy makers to identify—and subsequently develop—appropriate policy measures in response to a household's required energy expenditure, rather than their actual energy expenditure.

A series of studies using a mixed-methods approach to assessing the housing conditions of renters across Australia provided important snapshots of the thermal performance of housing across various regions, as well as the financial, health and wellbeing implications for households (Barrett, Catania et al. 2023; Dignam 2024; Dignam and Barrett 2022). The research methodologies provided compelling evidence about the deficit of large-scale housing quality information and the need to improve housing conditions across the rental sectors. There is capacity to reproduce these studies at a larger scale and potential to include data from the AHCD into the methodological approach.

## Energy hardship and poverty

The development of a poverty after housing cost (PAHC) indicator enabled researchers to examine residual household income (after basic housing costs are met) at the SA2 level, and to offer a more comprehensive understanding of housing affordability beyond the normative measures of housing stress (Randolph, Liu et al. 2023). Under this methodology, the findings showed that around 3 million Australians were experiencing poverty after accounting for housing expenditure, exposing the disproportionate burden of housing costs on low-income households.

To measure the prevalence and experience of energy hardship, methodologies have been adapted using the Household, Income and Labour Dynamics in Australia (HILDA) survey data. For Dekker and Nicolls (2018), analysis using the self-reported measure of energy hardship illuminated significant experiences of persistent energy hardship, illustrating the extent of energy hardship beyond household expenditure. Meanwhile, Azpitarte, Johnson et al. (2015) integrated 30 indicators from the HILDA survey into their analysis to construct a typology of energy hardship, illustrating its multiple dimensions.

### Locational dimensions of housing

A range of methodologies have been used to examine the relationship between housing affordability and locational advantage or disadvantage. A combined analysis of datasets derived from the Australian Bureau of Statistics (ABS) census data, housing market datasets, and the Bankwest Curtin Economics Centre (BCEC) Housing Affordability Survey enabled the research team to map the variations of housing affordability at a granular scale and capture the individual trade-offs households made to afford their home (Burke, Pinnegar et al. 2007; Cassells, Duncan et al. 2014). Meanwhile, Hulse, Pawson et al. (2014) developed a measure of locational disadvantage through the combination of longitudinal ABS census data and secondary housing market datasets, which showed that 1.7 million Australians were experiencing socio-spatial disadvantage.

Similarly, Sarkar, Gurran et al. (2024) demonstrated the further potential of ABS journey-to-work data through their development of a neighbourhood porosity-exclusion index. Gurran, Gilbert et al. (2018b) showed how a multi-method qualitative research approach can be designed to both clarify critical perspectives from key government and industry stakeholders on affordable housing policy, and to examine inclusionary zoning outcomes across various locations.

### Transportation disadvantage

The housing and transportation affordability index developed by Saberi, Wu et al. (2017) constitutes a significant methodological contribution that captures a granular understanding of housing and transportation affordability across different subregions and housing markets. Lastly, Gilbert, Nasreen et al. (2021) developed a valuable methodology for examining the relationship between housing affordability and commuter hardship patterns among key workers across Australia's largest cities.

## Policy development options

A range of opportunities exist to improve housing affordability outcomes in relation to the quality, performance, comfort and locational dimension of housing across Australia.

### Minimum standard of housing across the continuum

There is a strong need to increase the minimum standard of housing across the continuum in order to improve household living conditions and address the challenges posed by climate change. This includes measures to ensure homes meet basic standards of safety, accessibility, health and comfort. The recent changes to the NCC 2022 (Australian Building Codes Board [ABCB] 2022a) demonstrate a significant policy shift in this direction. However, as identified in this research, the voluntary application of these changes across the states and territories has led to variation in minimum performance requirements across Australia. Moreover, as the NCC 2022 applies to new or substantially renovated dwellings, the standard of housing for households in existing dwellings is not likely to improve without additional policy measures. In this context, there is a need to ensure that the energy-efficiency and liveable housing provisions of the NCC 2022 are adopted by all states and territories. Measures that seek to improve the housing performance of existing residential dwellings—particularly in the private rental sector—should also be explored, such as those implemented across Queensland and the Australian Capital Territory.

### Enhance energy-efficiency measures in rental housing

This research also underscored the need to introduce minimum standards for rental housing across the states and territories to enhance housing conditions and affordability. This should include:

- mandating minimum rental energy-efficiency standards
- facilitating targeted energy-efficiency upgrades
- empowering renters to make minor modifications without requiring landlord approval or fear of retaliation.

At the same time, overcoming initial financial hurdles for social and private housing providers to partake in retrofitting and renewable energy initiatives were identified as paramount—for example, fitting solar panels.

The recent introduction and expansion of energy-efficiency retrofit schemes across the social-housing sector represents a key step in this direction, as does the establishment of long-term energy-efficiency programs for low-income households such as the Community Solar Bank. By a similar token, several small-scale renewable energy incentive schemes that target private rental housing have been effectively administered across some jurisdictions, demonstrating a potential avenue for improving household energy performance.

### **Expand proactive responses to energy hardship**

In addition to increasing the energy and thermal performance of housing, policy considerations arising from the research emphasise the need for a better understanding of the linkages between housing affordability and energy hardship. Energy assistance programs are required to cater to the diverse types of households facing energy poverty, acknowledging the varied causes and dimensions of the problem. Policy responses should consider a household's required energy expenditure—rather than their actual energy expenditure—to adequately capture households that ration energy to lessen financial hardship.

Although energy hardship assistance can provide short-term relief to vulnerable households, there is a need for proactive intervention that targets the core drivers of energy hardship. There is a clear consensus across the evidence-base to increase income support payments such as JobSeeker, Disability Support Pension (DSP) and Commonwealth Rent Assistance (CRA) to help lower-income households manage their energy costs. Moreover, policy settings that improve landlord responsiveness to maintenance requests have potential to improve dwelling standards and reduce tenants' energy costs—thus benefitting all stakeholders.

### **Addressing locational and transportation disadvantage**

The need for well-located social and affordable rental options was identified to mitigate risks of displacement and offer increased proximity and accessibility to key resources and services. Further integration of housing, planning, transport and employment policies is critical. The Metronet infrastructure program in Western Australia provides an example of such inter-governmental support. More broadly, residents' choices and experiences in relation to housing were essential for effective policy formulation.

The evidence-base has demonstrated the effectiveness of inclusionary zoning to address both housing affordability issues and spatial disadvantage. There is great potential to extend inclusionary planning approaches. Planning incentives can be mechanised to encourage affordable housing inclusion within existing frameworks, through the likes of density bonuses. Barriers faced by private sector development—such as balancing the physical cost of development with affordable housing delivery—could be addressed through policy intervention addressing cost issues, including taxes, developer contributions to infrastructure, and exploring alternative construction technologies proven to cut costs, build times, and ultimately deliver greater housing affordability. To this end, there is also a need to increase planning certainty, to reduce developer risk and enhance affordable housing delivery outcomes.



## The study

Funded as part of the AHURI National Housing Research Program, this scoping study examines housing quality and locational dimensions of housing affordability.

Very few studies have collectively examined how households trade off housing (size, tenure, quality and location), energy and transport expenditures against each other when making housing decisions. While vast literatures exist across each theme, they remain largely siloed within specific scholarly, policymaking and public discourses. In turn, there is a need to consider the housing-energy-transport nexus, with a focus on housing quality and location in relation to affordability.

This research seeks to better understand how these factors affect household expenditure and wellbeing, to examine the policy response to address these issues, and to explore how a more robust approach to housing affordability could be developed to help improve household wellbeing outcomes across the housing continuum.

The research used a multi-phased in-depth document analysis. Federal, state and territory policies and practices were reviewed to identify the existing measures to:

- facilitate an adequate standard of housing across the continuum
- support households experiencing energy hardship
- promote housing affordability with a specific spatial focus
- seek to address transportation disadvantage (directly or indirectly).

Additionally, a wealth of cross-disciplinary academic and grey literature from the fields of housing, poverty, health and wellbeing, urban planning, transportation and energy across Australia was thematically analysed. Eleven qualitative case studies were developed to highlight methodologies and datasets that have demonstrative potential to strengthen current housing affordability measurements, along with policy considerations to help improve household outcomes across the housing continuum.



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