

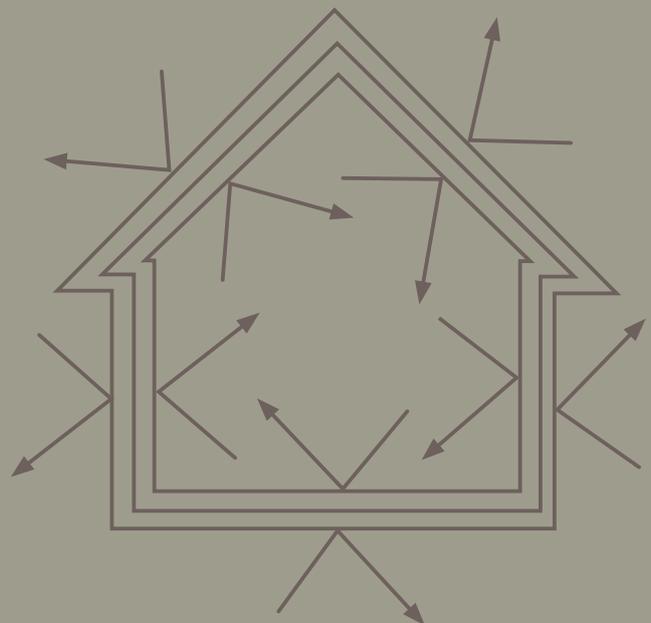


Australian Council
of Social Service



Energy Efficiency & People on Low Incomes

Improving Affordability





Who we are

ACOSS is the peak body of the community services and welfare sector and the national voice for the needs of people affected by poverty and inequality.

Our vision is for a fair, inclusive and sustainable Australia where all individuals and communities can participate in and benefit from social and economic life.

What we do

ACOSS leads and supports initiatives within the community services and welfare sector and acts as an independent non-party political voice.

By drawing on the direct experiences of people affected by poverty and inequality and the expertise of its diverse member base, ACOSS develops and promotes socially, economically and environmentally responsible public policy and action by government, community and business.

Acknowledgements

This paper was prepared by Andrea Pape, ACOSS Senior Policy Officer in consultation with the members of the ACOSS Energy Advisory Group.

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Introduction

Energy efficiency should be a key policy response for addressing the impacts of rising energy prices, yet it is largely absent from current political debates about cost of living pressures and energy affordability.

A growing energy efficiency gap

In response to sharp rises in energy prices in recent years, many Australian households have reduced their energy consumption by investing in energy efficient appliances, home upgrades, and installing rooftop solar panels (AEMO 2012). However, persistent barriers have prevented people on low incomes from investing in energy efficiency as a way of reducing costs. These barriers include lack of access to capital for high value energy efficiency upgrades, and the inability of tenants to improve the energy efficiency of rental properties. For people on low incomes, these barriers are evident in the lower incidence of insulation in low income housing and tenanted properties, and higher rates of ownership of inefficient appliances that are cheap to buy but expensive to run.

People on low incomes will be hit first and worst

The length, extent and severity of heatwaves has increased in recent decades, and climate change is increasing the risk of more frequent and more extreme hot days in future. Low income areas in Australian capital cities tend to be where surface temperature and heat exposure is greatest. Increasing temperature extremes are likely to compound the risks for households that are living in poor quality housing, rationing their heating and cooling, and trying to maintain healthy temperatures using inefficient appliances. Given these factors, it is no surprise that people on low incomes are twice as likely to have heat related health impacts when compared to people on higher incomes, particularly low income elderly people, and people who are living with health issues.

Time to address barriers

Government and industry programs so far have largely targeted people on low incomes with behaviour change and minor retrofits to help reduce electricity costs, and in many areas small items such as efficient light globes and showerheads have reached market saturation. There is ample scope, however, for Governments to facilitate longer term and significant interventions through enabling building and fixture upgrades in low income housing. Built environment improvements deliver value to society over the long term by improving affordability, climate resilience and health outcomes for current and future building occupants.

Energy efficiency should be a key policy response

Energy efficiency should be a key policy response for addressing the impacts of rising energy prices, yet it is largely absent from current political debates about cost of living pressures and energy affordability. While energy concessions are Government's primary mechanism for ensuring affordability for people on low incomes, energy efficiency can improve the effectiveness of concessions frameworks by contributing to system wide cost reductions, reductions in peak demand, delaying the need for new network and generation infrastructure, and driving down wholesale electricity prices.

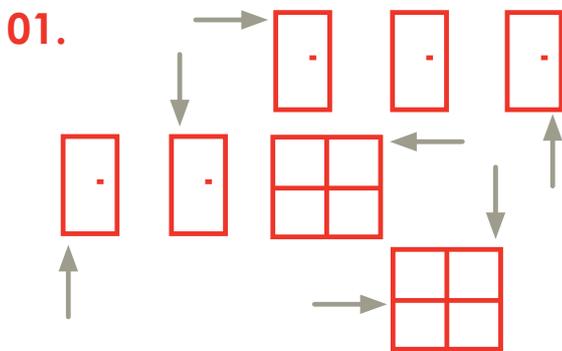
To address the key energy efficiency barriers faced by low income and disadvantaged households, ACOSS is calling for:

- / Energy efficiency standards for rental properties, and landlord tax incentives for energy efficiency measures to improve energy efficiency of rental properties;
- / Additional funding for targeted retrofits of the worst performing social housing where health, climate and hardship risks are greatest.



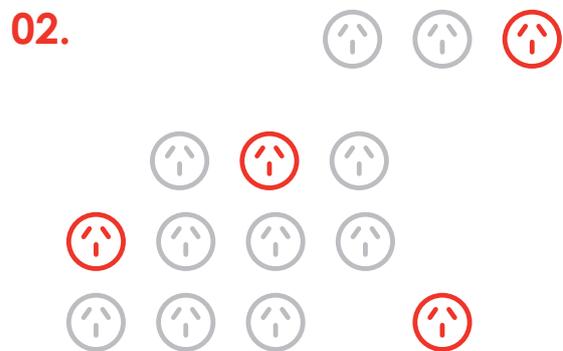
Poor building performance, coupled with inefficient heating and cooling appliances, can result in significant financial and health impacts for disadvantaged households trying to maintain healthy indoor temperatures. Review of published literature reveals five key issues.

What do we know?



Low income homes and appliances are inefficient:

People on low incomes are more likely to own old and inefficient refrigerators (ABS 2009a), use cheap and inefficient heaters (ABS 2009b), and are more likely to use electric hot water heaters which are more expensive to run than gas or solar systems (DHS 2008). Aggregate data provided by the NSW Home Power Savings Program showed that 77% of low income homes visited by the Program had gaps in doors and windows (HPSP 2013). Low income tenants are twice as likely to be living in an un-insulated home, when compared to owner occupied homes (ABS 2009a).

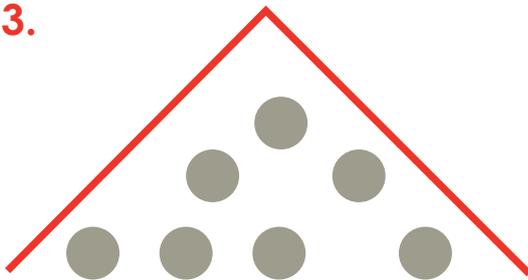


Many people on low incomes are rationing their energy consumption:

There is a minimum level of energy needed to maintain health and wellbeing for all people, yet there is evidence of disadvantaged households demonstrating an 'energy conservation' response to higher prices (such as avoiding heating and cooling) rather than an energy efficiency response (such as installing insulation or energy efficient heaters) (DCCEE 2012). Separate studies in NSW (IPART 2011a) and Victoria (ABS 2009a) have found that people on low incomes use their air conditioners less frequently than people on high incomes.

What do we know?

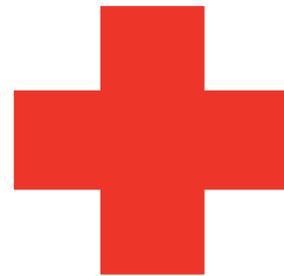
03.



Some households are more vulnerable to rising energy costs:

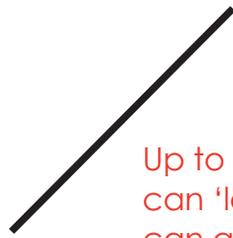
With noticeably fewer energy-consuming appliances (such as home entertainment equipment and information technology products) than higher income homes (ABS 2009a, ABS 2009b), energy consumption in low income homes is more directly linked to the number of people in the home (IPART 2011b, ABS 2009b). This raises cost and hardship implications for families on the lowest incomes. Single parent families, for example, have been found most likely to seek emergency assistance to help pay for their energy costs (Anglicare 2008). Significant hardship is also experienced by people who need to charge wheelchairs or run medical equipment at home, and by those with a medical need to control body temperature. For example, people with multiple sclerosis (MS) have very low tolerances to heat and cold, and some need to run their air conditioners as much as 15 times longer than the average household (Summers 2009). Research has found that rising energy prices can drive people with medical needs to reduce their heating, even if it is to the detriment of their health (PIAC 2012).

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Health and mortality risks are greater in inefficient, low income homes:

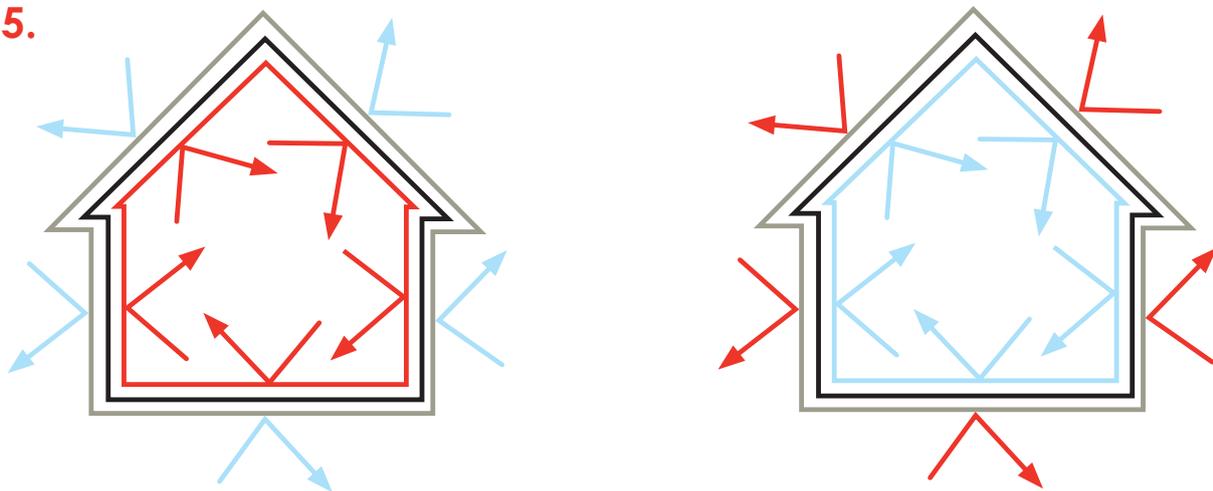
Common conditions in sub-standard housing include lack of insulation, damp, mould, excessive indoor temperature extremes and inability to afford heating and cooling (UTAS 2009). Heatwaves kill more Australians than any other natural disaster and key risk factors for heat-related health impacts are often twice as prevalent for people on low incomes, compared to those with medium to high incomes (CSIRO 2013). In heatwaves, the highest mortality rates exist for people on low incomes, people over 80 years of age and people with health issues (PWC 2011). Low income housing in Adelaide, Sydney, Melbourne and Brisbane are typically found in city areas with the highest land surface temperatures, so those most vulnerable to heat-related health impacts often live in areas where exposure to heat is greatest (CSIRO 2013). The CSIRO estimates that climate change will compound health risks for people living on low incomes, with a predicted growth in energy required for cooling a typical slab-on-ground, brick veneer home by 75%-115% in Melbourne, and 95-359% in Brisbane by 2070 (CSIRO 2013).



Up to 35% of the energy we use to heat or cool our homes can 'leak' out of a home without insulation, and draughts can account for up to 25% of heat loss during winter. An energy efficient house keeps the cold out and the warmth in, and does the inverse in summer.

What do we know?

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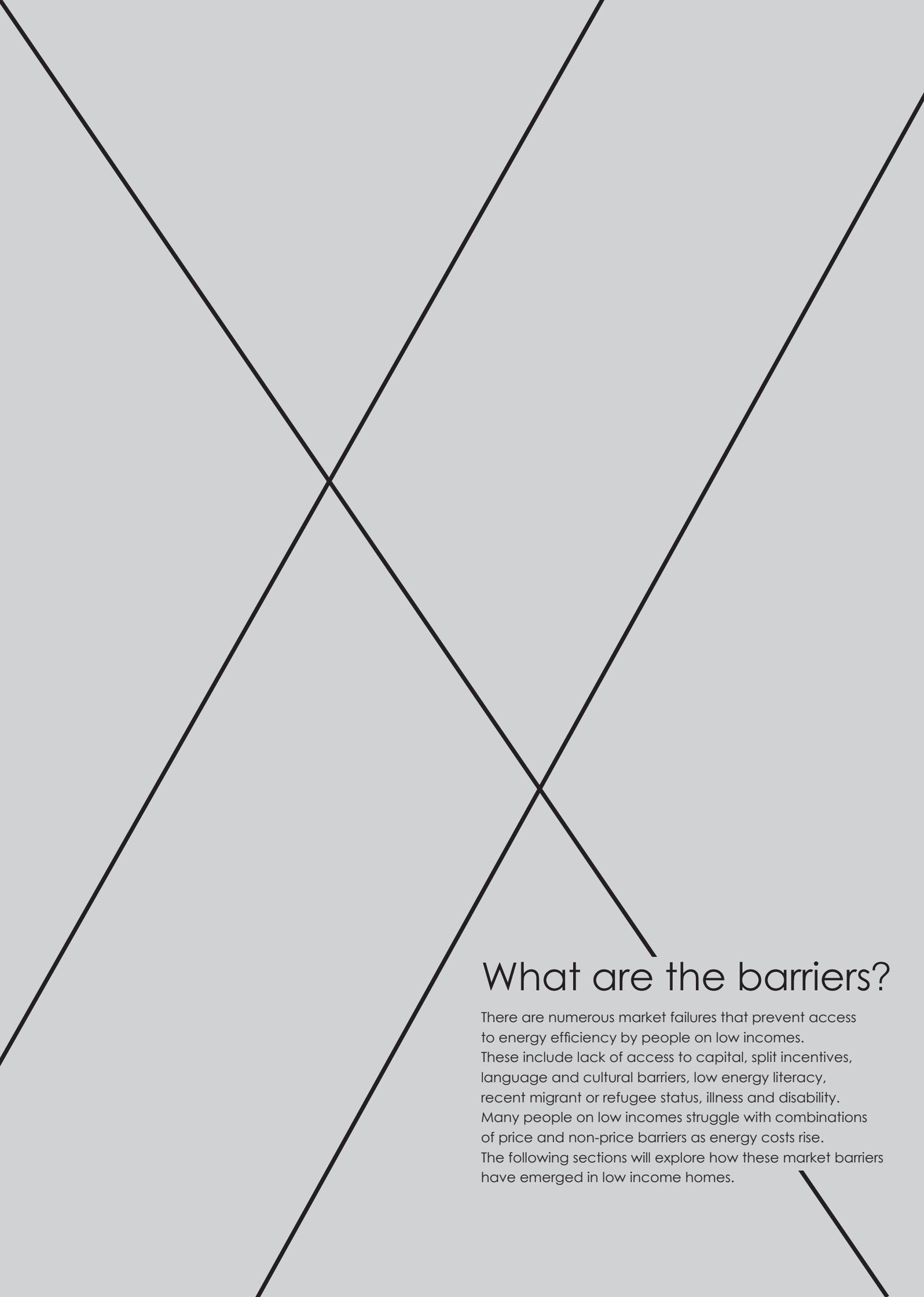


Home upgrades can reduce household and system costs, improve public health outcomes and increase community resilience in a changing climate:

Raising a home from a 2-star to 5-star energy rating can result in a 54% reduction in energy required for space heating and cooling in Victorian homes. This equates to a 32% total energy saving, or up to \$600 in annual household savings a year (OMH 2013).

Up to 35% of the energy we use to heat or cool our homes can 'leak' out of a home without insulation, and draughts can account for up to 25% of heat loss during winter (DRET 2010). Insulation retrofits improve the effectiveness of heating and cooling, particularly for those trying to cope with increasingly extreme weather events and climate variability. New Zealand research showed that installing insulation in cold climate households resulted in: a decrease in electricity consumption of 5%; an increase of 1-2°C in internal winter temperature (Grimes et al 2012); significant improvements in the health of occupants; and reductions in hospitalisations and pharmaceutical costs. Improvement in building thermal performance can also reduce respiratory illness (PWC 2011) and severe heat-related health risks in temperate climates by 25%.

Reductions in heating and cooling loads can benefit the wider network by reducing peak demand. Insulation retrofits in New Zealand have been shown to decrease average household peak electricity consumption by 18% during winter months (Grimes et al 2012).



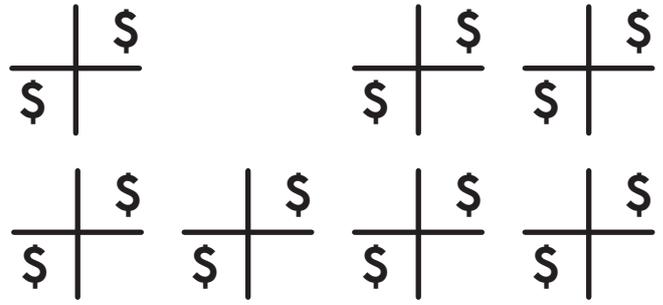
What are the barriers?

There are numerous market failures that prevent access to energy efficiency by people on low incomes. These include lack of access to capital, split incentives, language and cultural barriers, low energy literacy, recent migrant or refugee status, illness and disability. Many people on low incomes struggle with combinations of price and non-price barriers as energy costs rise. The following sections will explore how these market barriers have emerged in low income homes.

Barrier 01:

Capital

While the efficiency of the appliance market has evolved, people on low incomes are less able to benefit from new efficiencies as they have less capacity to pay for the upfront costs for new products. This is evidenced by the prevalence of appliances in low income households that have low up-front costs but are expensive to run.



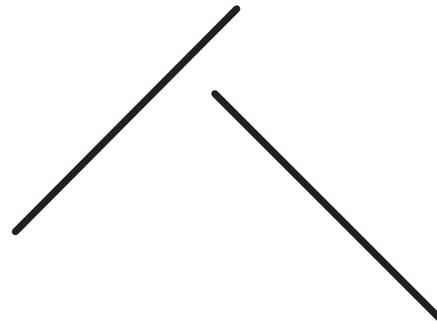
The energy efficiency of some appliances has improved over the past 2 decades following enforced labelling and mandatory energy performance standards (MEPS) for a range of appliances sold in Australia, including refrigerators and freezers, split system and ducted air conditioners, electric storage water heaters, televisions and fluorescent light globes. As a result there has been significant reduction in the running costs of new appliances, such as a 40% reduction of energy consumption of new refrigerators from 1993 to 2006 (EES 2006).

While the efficiency of the appliance market has evolved, people on low incomes are less able to benefit from new efficiencies as they have less capacity to pay for the upfront costs for new products. This is evidenced by the prevalence of appliances in low income households that have low up-front costs but are expensive to run. These include high levels of ownership of old refrigerators (ABS 2009a), cheap and inefficient heaters (ABS 2009b), and electric hot water heaters (DHS 2008).

The capital barrier has even emerged in the uptake of white certificate schemes to encourage energy efficiency uptake in low income areas. The Brotherhood of St Laurence's equity analysis (Sullivan and Johnson 2012) of the Victorian Government's Victorian Energy Saver Initiative (VESI) has shown that relatively disadvantaged areas were less likely to access higher capital items offered under the scheme, such as hot water services, space heating and insulation. These items generate markedly higher energy savings for households, however the report findings suggested that people on low incomes were less likely to access the higher capital items because of the co-payments required by the scheme.

Cost was also the most commonly reported barrier to energy efficiency improvements by low income participants participating in the Victorian Warm Home Cool Home and Concession Assist program (Johnson et al forthcoming).

Barrier 02:



Split incentive

The landlord-tenant split incentive is a powerful and persistent market failure which has been identified as a key barrier preventing tenants from installing energy efficiency products (Johnson et al forthcoming) and insulation (ABS 2009a). The split incentive deters investment in improving rental building thermal performance and the energy efficiency of fixed appliances such as air conditioners and hot water heaters.

Under Australian Tax Law, landlords are unable to claim a tax deduction or depreciation for energy efficiency upgrades, or installation of solar hot water or embedded generation on their rental properties. These upgrades are considered to be capital improvements, which are added to the property cost base for calculation of capital gains when the property is sold (ATO 2012). In contrast, spending on 'maintenance', including 'like for like' replacement of inefficient equipment, is tax deductible.

For most landlords, tax offsets on rental returns are likely to be more attractive than deductions from capital gains. Most private rental investors are small scale 'mum and dad investors' (Berry 2000) who cite long term capital gain as their primary reason for investment (DSE 2009). Only 15 per cent of investors rely on rental returns as their primary source of income (ABS 1998). The annual tax return is a stimulus for landlords to examine ways of offsetting their rental incomes, yet under current tax settings the incentive for energy efficiency upgrades is only realised at the point of property sale – if at all. At the point of sale, energy efficiency must compete with investment on cosmetic property upgrades in order to maximise the selling price. Failure of governments to implement the Mandatory Energy Disclosure policy agreed at COAG in 2009 means that the resale market is uninformed about the benefits of any efficiency upgrades made by landlords, further reinforcing the information failure and market barrier. Given these settings, it is unsurprising that energy efficiency is a low priority for landlords.

The rental market is, of course, an investment market, and it appears that the market settings are geared towards a 'set and forget' approach to the efficiency of tenanted homes.

This leaves tenants with the high cost of heating and cooling leaky homes, or running inefficient hot water systems, because they do not have the rights or means to upgrade the building or permanent fixtures.

The lack of landlord engagement in energy efficiency is evident even in the installation of free energy efficiency upgrades. Aggregate data released by the NSW Home Power Savings Program showed that only 10.2% of private landlords gave permission for the program to install free efficient showerheads and draught strips for low income renters participating in the program (HPSP 2013). Similarly, renters were significantly under-represented in the Central Victorian Solar City program, and comprised only 2% of recipients of energy savings assistance through the program (CVSC 2013).

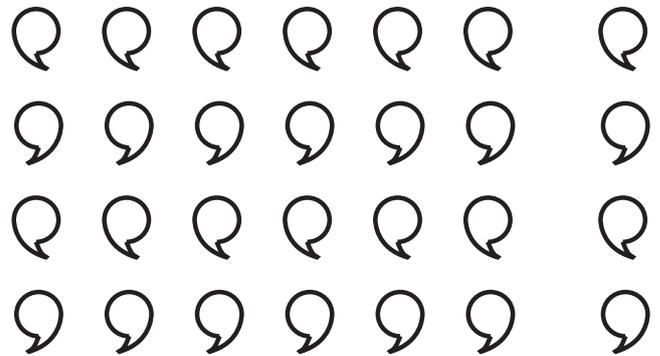
This market barrier is likely to be impacting some of the most vulnerable energy consumers in Australia. One-half (49%) of people on low incomes are living in rental properties (where low income is defined as the bottom quintile of household incomes), and people on low incomes are twice as likely to be renting than those in the highest income quintile (ABS 2008). Most (74%) low income renters are renting from a private landlord (DSE 2009) and private renters are significantly more likely to enter energy hardship programs than owner occupiers (IPART 2010).

Single parents are also likely to be disproportionately impacted by this market barrier. Lone parents are more likely to be renting than couples: The Australian Bureau of Statistics found that 64% of lone parents with dependent children were renting, in contrast to 63% of couples with children under 15 who were living in owner-occupied homes with a mortgage (ABS 2007). This is a reflection of the relatively lower household incomes of one parent families. Newly arrived migrants are also over-represented in rental properties. The impact of the landlord/tenant barrier for these people is likely to be compounded by larger household sizes and energy needs, and particularly low levels of income and access to capital.

Barrier 03:

Information

In many cases, information from different sources can be conflicting or complex.



For people experiencing disadvantage, there are a range of information barriers that can prevent them from accessing energy efficiency. These include:

- / literacy and language barriers: some energy companies enclose energy efficiency leaflets and booklets with electricity bills. While this type of information provision is appropriate for some sectors of the population, information failure can occur for non-English speaking people and for people with disabilities or literacy issues that prevent them from reading.
- / confusion about products and programs and where to find reliable information: for people with internet access there is a plethora of energy efficiency websites, developed by energy companies, technology providers, the retail industry, state and territory Governments and the Commonwealth Government. In many cases, information from different sources can be conflicting or complex.
- / understanding of the most effective ways to save energy: a survey conducted by the Clean Energy Council in 2011 found that 73% of Australian households wanted more information on how they could save energy (CEC 2011), and yet in-home energy efficiency programs are finding that people are confused about the most effective ways to save energy.

Information barriers are likely to become more critical to understanding energy efficiency as new tariff products emerge through the introduction of time variant pricing.



What is currently available?

There is a diverse and sometimes overlapping array of state, territory and commonwealth programs available to assist people on low incomes with energy efficiency. While their intent is good, the plethora of programs and offerings can lead to confusion.

Also, many programs focus on low cost interventions, minor retrofits and behaviour change as a way of assisting people. While these interventions are worthwhile and have been found to create savings, there is limited future scope to help low-income consumers through providing small items such as standby power boards, energy efficiency light bulbs and water saving showerheads. These products have been aggressively distributed in many states and, in many areas, have reached market saturation. There is ample scope, however, for Governments to provide more permanent and significant interventions such as improving building thermal performance or upgrading permanent fixtures.

While these interventions are worthwhile and have been found to create savings, there is limited future scope to help low-income consumers through providing small items such as standby power boards, energy efficiency light bulbs and water saving showerheads.



In-home energy efficiency programs

A range of Commonwealth, state/territory and retailer programs are available across Australia to target energy efficiency advice, retrofits and assistance to people on low incomes. The largest is the NSW Government's \$63M Home Power Savings Program, which provides behaviour change assistance and an energy savings kit, which includes small energy efficiency items including showerheads and draught excluders. The Commonwealth's \$50.5M Home Energy Saver Scheme, funded through the Clean Energy Future package, provides behaviour change information, access to financial advice and microfinance for efficient appliances.

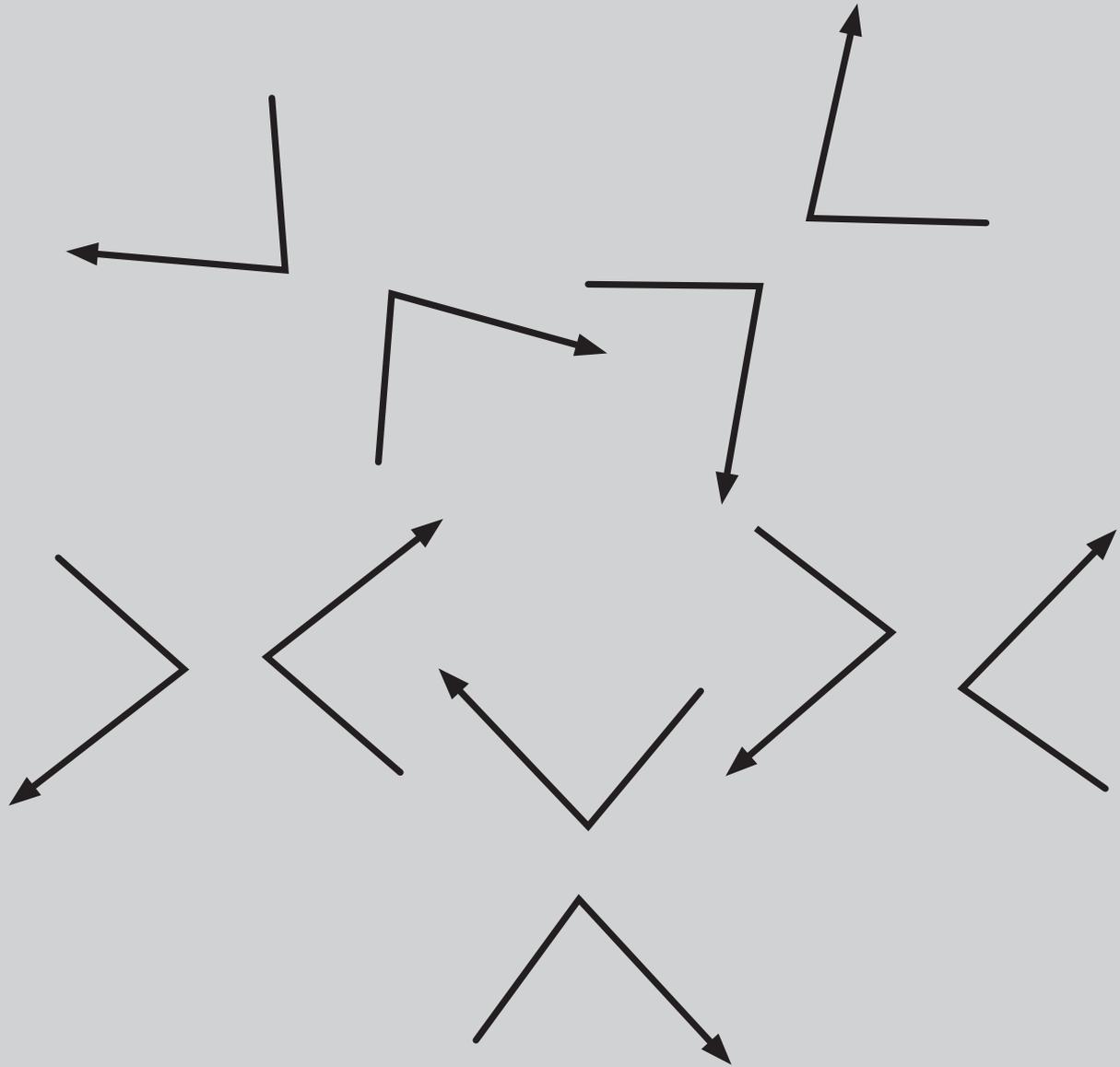
The ACT Government's Outreach Energy and Water Efficiency Program has assisted over 3300 low income households with access to a range of services including home energy efficiency assessments, education, retrofits and replacement of inefficient essential appliances. A 2012 case study (under publication) demonstrated a 22% average reduction in energy use across 11 of the households participating in the project. Similar results have been found in the Central Victoria Solar City trial, which showed average household savings of 13%, and greater savings for solar PV recipients (13%) and solar hot water recipients (22%) (CVSC 2013).

The number and types of programs have increased significantly following the 2012 launch of the Commonwealth Government's \$100M Low Income Energy Efficiency Program, which provides funding to consortia of local and state governments, community welfare organisations and energy companies to trial and evaluate different approaches to help people on low incomes to become more energy efficient. The bulk of successful Round 1 projects announced in 2012 identified information failure as a key barrier that the project would address. Future rounds of the program were discontinued in the 2013 Federal Budget.

Energy efficiency incentive schemes

A number of incentive schemes currently operate around Australia, including the South Australian Residential Energy Efficiency Scheme (REES), the NSW Energy Savings Scheme (ESS) and the Victorian Energy Efficiency Target (VEET). While scheme design differs from state to state, most involve the setting of energy efficiency targets for electricity retailers, who are required to pay for third parties to provide energy efficiency services or products to households and businesses. The costs of the schemes are passed on to consumers through their bills.

While all energy consumers contribute to these schemes through their energy bills, there is evidence that people on low incomes may not have equitable access to scheme benefits when co-contributions are required for more expensive scheme offerings (Sullivan and Johnson 2012). Some schemes, such as the South Australia Residential Energy Efficiency Scheme, have addressed equity issues through setting participation targets for pensioner concession card or health care card holders. Similarly, the UK Energy Efficiency Commitment set electricity and gas retailers a portfolio target of 50% energy savings in households eligible for a range of welfare benefits. The Commonwealth Department of Resources Energy and Tourism has been examining the feasibility of a national scheme (the National Energy Savings Initiative) in Australia, however no implementation commitment has been made at this point.



What can we do?

ACOSS policies to improve energy efficiency and housing standards for people on low incomes.

Policy 01:

Landlord tax incentives for energy efficiency measures.

Landlord inertia needs to be addressed in order to stimulate energy efficiency investment in the rental market. ACOSS recommends a combination of incentives and regulation to ensure that rental accommodation is efficient, healthy and affordable. Tax incentives are a progressive way of funding improvements in the energy efficiency of rental housing stock. The UK Government has introduced a tax incentive scheme called the Landlord's Energy Saving Allowance (LESA), which enables landlords to claim up to £1,500 a year for insulation (wall, ceiling and floor), draught proofing and hot water system insulation. ACOSS believes that similar incentives should be introduced here to stimulate investment in the efficiency of rental properties. Such a scheme should include measures such as insulation, draught proofing, solar hot water, photovoltaic systems, awnings, security doors (for ventilation), external blinds and shade trees for hot climate areas.

Policy 02:

Energy efficiency standards for rental properties, and mandatory disclosure of energy and water efficiency of all properties at point of sale.

In addition to incentives for landlords, energy efficiency standards should be developed to require landlords to ensure that their properties are adequately insulated, draught proof and have effective shading (awnings, shade trees), window coverings (curtains and pelmets), and efficient/appropriately sized and insulated hot water systems. These regulations should be introduced after a period of time during which landlords have been able to access tax incentives to help with the capital cost of upgrading their investment properties. Monitoring of rental incomes should be undertaken e.g. through the tax system and/or by the ACCC to detect impacts on the rental market, and to protect tenants from unfair rent increases.

Policy 03:

Additional funding for targeted retrofits for the worst performing and highest risk social housing stock.

Additional funding should be provided for upgrades of the poorest quality social housing that requires large amounts of energy for heating and/or cooling. Upgrades could include insulation, shading, draught proofing and more efficient fixed appliances (such as hot water systems). Urban greening and the development of cool places for respite should also be considered to moderate ambient temperatures. Upgrades should be targeted at:

- / areas of highest temperature variation, including extreme heat and cold exposure;
- / areas where risk factors are found to coincide, for example elderly people, people with chronic or severe health issues, and people who are living alone; and
- / dwellings with high running costs.

Partnerships can help government to target upgrades where they are most urgently needed. Organisations such as energy retailers, community sector outreach providers, in-home energy efficiency programs, health providers and housing providers can help to target people in public housing at highest risk.

Policy 04:

Financial support to help with up-front costs of energy efficiency upgrades.

ACOSS supports the provision of microfinance to help people invest in energy efficient appliances and home upgrades. Higher capital upgrades can reduce running costs over the long term, and low or no interest loans can be used to help with the up-front cost of the upgrades while minimising borrowing costs for people on minimal incomes. Such schemes can help with upgrades such as efficient refrigerators and hot water systems, efficient heating and cooling units. Microfinance should also extend to purchase and installation of solar panels, roof insulation and external shading and blinds. Examples of current microfinance schemes include Good Shepherd and the No Interest Loans Scheme.



Policy 05:

Face to face assistance for targeted advice and services.

Home visits can provide tailored energy efficiency advice and assistance that takes into account the context and individual issues of the household. This type of assistance is particularly important for people who are unable to access written or online information, for instance people with physical disabilities, or people with literacy, language or technological barriers. Home visits can also provide trained people to assist with microfinance applications for energy efficiency upgrades, or installation of energy savings kit items that would most benefit the household.

Home visits could potentially provide added value by helping households navigate the energy retail market by providing access to internet and price comparators during their visit. This could help to support consumers as more complex products are introduced through energy market reforms such as retail market deregulation and demand side participation. Data collection and evaluation are also vital for in-home programs, because they enable comparison of the value of different interventions and therefore help to refine and inform future government policies and programs.

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