Brotherhood of St Laurence
Working for an Australia free of poverty

National Energy Savings Initiative

Submission to
Department of Climate Change and Energy Efficiency (DCCEE)
Department of Resources, Energy and Tourism (DRET)

Brotherhood of St Laurence

February 2012

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Summary

The Brotherhood of St Laurence supports the introduction of a National Energy Savings Initiative (NESI) with appropriate measures to ensure low-income and vulnerable households are able to share in the direct benefits of the scheme. This submission focuses on the treatment of low-income households in the NESI. It makes the following key points:

A large-scale NESI is a welcome measure to reduce energy prices and unlock energy savings in the economy. The **NESI's primary objectives** should be to:

- reduce energy prices by reducing the need for new energy infrastructure. It should achieve this by reducing energy demand and the intensity of energy usage across the economy, including the residential sector.
- reduce energy usage by individual households and businesses, by assisting them to access energy efficiency improvements.

The NESI's secondary objectives should include:

- to assist low-income households improve their energy efficiency
- to assist households who are especially vulnerable to rising energy prices.

Our arguments for a specific mechanism to support low-income households are as follows:

- The benefits for households in the scheme will primarily flow to those who receive subsidised energy efficiency measures under the program. The benefits from the system wide savings are small for individual households. Therfore, to ensure low-income households share equitably in the benefits they need to participate directly in the scheme.
- Low-income households face significant barriers to energy efficiency, including a lack of access to up-front capital. They typically have less efficient homes and appliances. This is particularly apparent with capital-intensive items like hot water systems, refrigerators, and insulation.
- An equity analysis of the Victorian Energy Efficiency Target scheme (VEET), in Melbourne, shows that the distribution of capital-intensive measures such as hot water systems favours more advantaged areas. Unless additional measures are put in place to assist households in disadvantaged areas, the future benefits from the scheme are likely to be more concentrated in more advantaged areas. This is likely to occur even though overall the scheme currently favours more disadvantaged areas.
- The Carbon Emissions Reduction Target (CERT) scheme, in the United Kingdom, provides an important example of a large-scale, cost-effective scheme which incorporates obligations to assist vulnerable households. In addition to operating efficiently, the scheme has assisted thousands of households to move out of fuel poverty.

The mechanisms to address the needs of low-income households should include:

- a sub-obligation to assist low-income households, with an additional obligation to assist households vulnerable to fuel poverty
- a financing mechanism to assist those low-income households who can afford to pay over time for capital-intensive measures such as hot water service replacements.

1 Introduction

The Brotherhood of St Laurence is an independent non-government organisation with strong community links that has been working to reduce poverty in Australia since the 1930s. Based in Melbourne, but with a national profile, the Brotherhood continues to fight for an Australia free of poverty. We undertake research, service development and delivery, and advocacy, with the objective of addressing unmet needs and translating the understandings gained into new policies, new programs and practices for implementation by government and others.

The Brotherhood is a leading national voice on the impacts of climate change and climate policy on Australians with low incomes. We have developed our knowledge and influence through long-term engagement with low-income households, community organisations and all levels of government in research, advocacy and program development. In this work we develop solutions and advocate policies that improve social equity by building the capacity of low-income Australians to respond to climate change and implement effective climate change adaptation.

We are increasingly concerned about the impact of rising energy prices on low-income and vulnerable households. Energy efficiency provides an essential means to reduce these households' exposure to rising prices. However, many lack the up-front capital to invest in efficiency upgrades. The Commonwealth Government has an important role to play in assisting low-income households to improve their energy efficiency and in unlocking the economy-wide benefits from energy efficiency.

For this reason we support a National Energy Savings Initiative, with appropriate measures to ensure low-income households are able to share the scheme's benefits.

This submission covers the following areas:

1. The NESI scheme objective
2. Why a specific mechanism is needed for low-income households
3. The choice of mechanism to address low-income households

2 NESI scheme objectives

The NESI scheme's primary objectives should be to:

1. reduce energy prices by reducing the need for new energy infrastructure. It should achieve this by reducing energy demand and the intensity of energy usage across the economy, including the residential sector.
2. reduce energy usage in individual households and businesses, by assisting them to access energy efficiency improvements.

Importantly, low-income households must be able to share equitably in the benefits. This is particularly important because these households face magnified barriers to introducing energy efficiency measures, including difficulties raising capital (as outlined below).

Low-income households who receive an energy efficiency service will benefit considerably more than low-income households who do not. Participating households will benefit by approximately $3.50 per week, while households who only benefit from the system-wide savings are expected to

benefit by less than 50 cents per week (SKM 2011). Similarly, modelling for the Victorian Energy Saver Incentive Phase 2 shows participating households will benefit by around $308 over 5 years, considerably more than those households who do not participate and save $40 over 4 years (ACIL Tasman 2011; DPI 2011).

To address this issue the NESI should incorporate both a fixed proportion of savings assigned to measures for low-income households and a mechanism to assist low-income households implement capital-intensive measures.

Assisting low-income households should also be explicitly incorporated into both the scheme's objectives and its principles. This should be achieved by including the following secondary objectives:

- to assist low-income households improve their energy efficiency
- to assist households who are especially vulnerable to rising energy prices.

3 Why a specific mechanism for low-income households?

Magnified barriers to energy efficiency measures

The barriers to the take-up of energy efficiency measures in low-income households and the case for government intervention have been documented on a number of occasions (see KPMG 2008; Wilkins 2008). The magnified barriers for these households include:

- lack of up-front capital to pay for energy efficiency improvements
- higher discounting rates for the benefits of energy efficiency (Hausman 1979). This reflects the higher value low-income households place on a dollar in the hand today as opposed to a dollar in the future.

As with other households, there are likely to be other barriers and market failures including:

- lack of information
- transaction costs associated with choosing and initiating energy efficiency upgrades
- risk aversion both to loss of capital and installation problems. Concerns about installation are likely to have increased following widespread reporting of the problems with the Commonwealth's Home Insulation Program.
- split incentives between landlord and tenant, for those in the private and public rental market.

It is important to note that while low-income households have less efficient appliances, on average their overall consumption is lower than wealthier households. This is because, on average, these households have fewer appliances. However, these households are also effectively locked into poor energy usage patterns. Behaviour change, although important, is not sufficient to address the issues faced by these households.

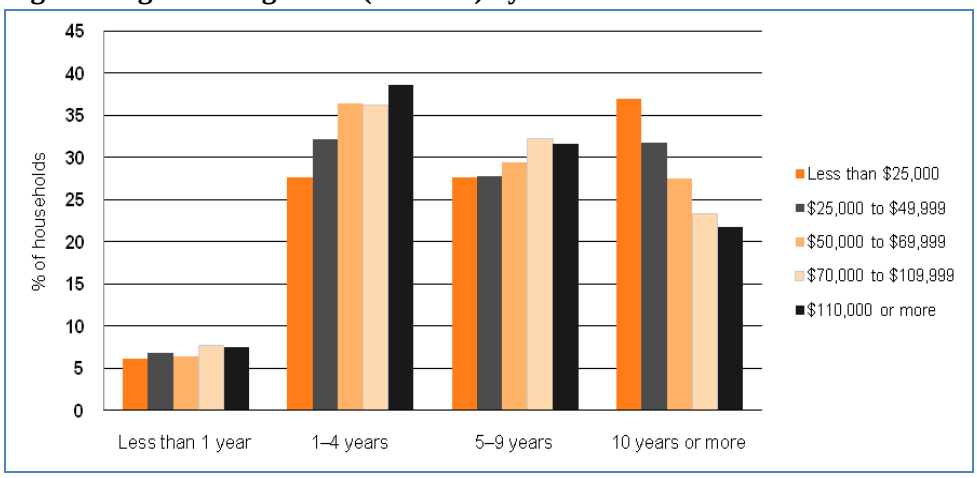
Less-efficient buildings and appliances than other households

While there are significant gaps in the data on energy efficiency of homes and appliances for different income groups, the available information illustrates a clear pattern: low-income households are more likely to have less efficient homes and appliances.

Refrigerators

Refrigerators are a major user of energy in most homes, ranked third overall behind heating/cooling and hot water. As Figure 1 shows, low-income households are more likely than wealthier ones to have an older refrigerator which is less efficient and costs more to run (ABS 2009a). Refrigerator age is an important guide to efficiency because Mandatory Energy Performance Standards (MEPS) have resulted in dramatically improved efficiency over the past 20 years. Average refrigerator energy consumption fell by 3.9 per cent per year between 1993 and 2005 (Energy Efficient Strategies 2006).

Figure 1 Age of refrigerator (Victoria) by income

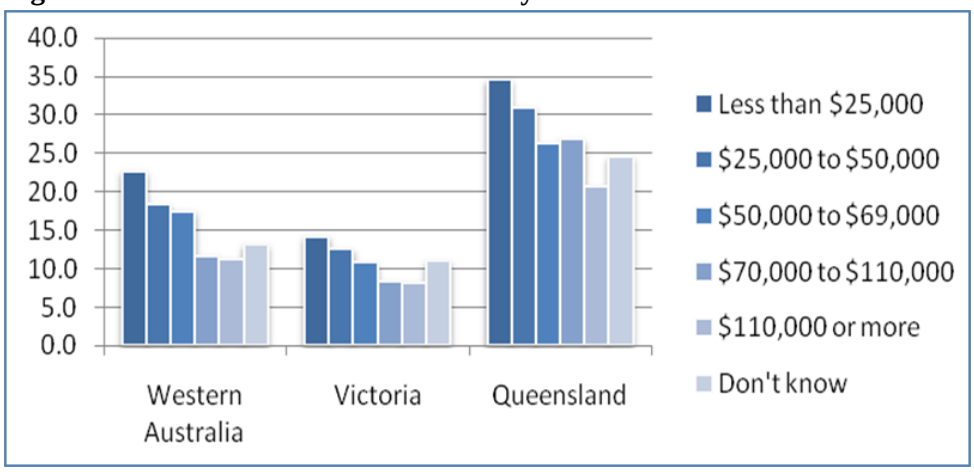


Data source: ABS 2009a

Insulation

Insulation is essential for heating and cooling to work efficiently and cheaply. Low-income households are more likely to live in a house without insulation. Figure 2 shows the percentage of households without insulation in Western Australia, Queensland and Victoria, by income group.

Figure 2 Households without insulation by income



Data source: ABS 2009b; ABS 2010a; ABS 2010b

Heating

In cooler climates, heating contributes a significant proportion of household energy costs. Households whose main form of heating is a portable electric heater are likely to face high energy bills, or alternatively have a particularly cold house. In Victoria a recent survey found that:

- five per cent of non-aged concession card–holding households use portable electric heaters as their main form of heating. In comparison 2 per cent of aged concession households and 2 per cent of non–concession holders have this as their main form of heating
- another 5 per cent use a built-in electric heater as the main form of heating
- another 1 per cent have no main heater (Roy Morgan Research 2008).

While these householders make up a relatively small proportion of the population, they have few affordable choices to install efficient heating.

Hot water

Hot water systems are another major energy user in most Australian households. Low-income households are more likely to have electric hot water systems, which are expensive to run, than wealthier households. In Sydney, for example, 66 per cent of low-income households have an electric hot water service, while only 42 per cent of high income households have electric hot water (IPART 2010). In Victoria, where reticulated gas is more widespread, concession households were still more likely than non-concession households to have an electric hot water system (21 per cent compared to 16 per cent) (Roy Morgan Research 2008).

The phase-out of the sale of electric hot water systems in Australia will begin to address this issue; however it is likely to lead to new problems. For households without access to reticulated gas, the cheapest replacement option is likely to be bottled gas but this results in expensive running costs.

Existing energy savings schemes don't satisfactorily address the high-cost measures

The Victorian Energy Saver Incentive (hereafter VESI), also referred to as the Victorian Energy Efficiency Target (VEET) scheme, provides useful insight into the performance of a white certificate scheme which does not include a specific obligation to assist low-income households.

In an equity analysis of the VEET scheme (Sullivan & Johnson forthcoming)[1], Brotherhood researchers cross-referenced the creation of VEET certificates by postcode with the ABS Index of Relative Socioeconomic Advantage and Disadvantage (IRSAD). The key results for Phase 1 of the VESI in metropolitan Melbourne include the following:

1. Relatively disadvantaged areas have received a greater share than more advantaged areas of the total VESI benefits, measured by Victorian Energy Efficiency Certificates (VEECs).

2. The higher rate of VEECs created in disadvantaged areas reflects the high proportion of VEECs created through replacement light globes, primarily compact fluorescents (CFLs), and replacement high-efficiency showerheads, which were provided free of charge.

3. Disadvantaged areas have received fewer of the measures which cost more to install but have higher energy efficiency returns, such as hot water services, space heating and insulation.

[1] The full paper has been provided to DCCEE and DRET. Copies will be available from the Brotherhood of St Laurence.

4. More advantaged areas have received more of these high-value, high-return measures including hot water service replacements. These items generate markedly higher savings per household than the low-cost measures but are likely to involve a householder co-contribution.

The following results highlight the inequity in the socioeconomic distribution under the scheme of high-value measures such as space heating (Figure 3), hot water (Figure 4) and insulation. While these measures represent a small proportion of current activities, they are likely to represent a higher proportion of future VEET activity (and most likely NESI activity) as the market for low-cost measures, particularly free light-globes and showerheads, becomes saturated.

Full details of the methodology are provided by Sullivan and Johnson (forthcoming, see Footnote 1). Figures 3 and 4 include the rate of Victorian energy efficiency certificates (VEECs) created per 100 households on the vertical axis and the level of relative socioeconomic disadvantage and advantage measured by IRSAD quintile along the horizontal axis, with 1 representing the most disadvantaged 20 per cent (or quintile) of the population, and 5 representing the most advantaged and least disadvantaged 20 per cent.

Figure 3 VEECs per 100 dwellings by IRSAD quintile in greater Melbourne: space heating, all efficiency upgrades

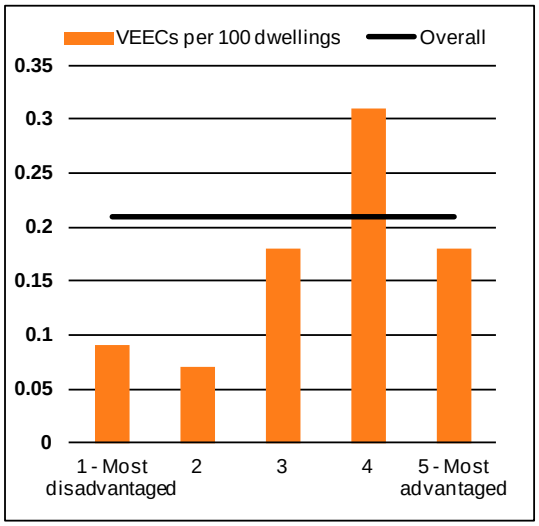
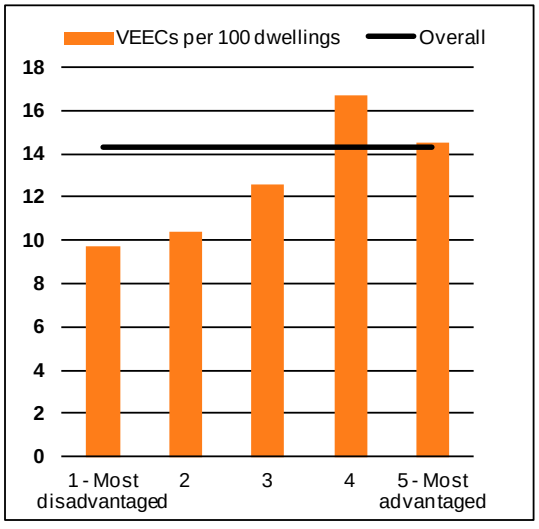


Figure 4 VEECs per 100 dwellings by IRSAD quintile in greater Melbourne: all hot water upgrades



These results indicate that although the overall benefits from the VEET scheme are currently equitably shared, there is a clear inequity in the distribution of higher value measures. This inequity is likely to increase in the future unless a specific mechanism is put in place to ensure low-income households receive an equitable share of the benefits.

Priority groups work in large-scale programs

The treatment of low-income households in other retailer obligations is also instructive. In Australia, South Australia's REES scheme includes specific requirements for low-income households. Both Victoria's Energy Savings Initiative and NSW's Energy Savings Scheme do not include any specific requirements.

In the United Kingdom, the successful Carbon Emissions Reduction Target scheme (CERT), previously known as the Energy Efficiency Commitment (EEC 1 and EEC 2), includes a priority group. The final period of the CERT required that 40 per cent of savings be achieved in a priority group made up of 'vulnerable and low-income households, including those in receipt of eligible benefits and pensioners over the age of 70' (DECC 2011). A further target required that 15 per cent of these savings be 'achieved in a subset of low-income households (a super priority group) considered to be at high risk of fuel poverty'[2] (DECC 2011).

Studies of the UK's CERT scheme have shown that it is a cost-effective approach to reducing carbon emissions (NAO 2008). This indicates that large scale, white certificate schemes which specify a priority group can work effectively.

Analysis of the CERT scheme suggests that it has also reduced fuel poverty. Hulme (2009) concluded that the CERT scheme would result in 163,000 households being removed from fuel poverty, including136,000 'vulnerable' households (defined as all elderly households, households containing children under the age of 16 and the disabled). A further 249,000 households would have reduced vulnerability to fuel poverty, as their spending on energy reduced.

Other existing programs cover different ground to the NESI scheme

Apart from state-based energy savings initiatives, such as VEET, a variety of other state and federal government programs assist households including low-income and vulnerable households to improve their energy efficiency. Some programs exclusively target low-income households. The NESI should be designed to complement these programs.

Importantly, a NESI will provide long-term, structural reform of the energy market, whereas government-funded programs are limited in time and subject to the vagaries of political decision making. We want to ensure that low-income households are able to participate in this long-term reform.

Home audit and retrofit programs targeting low-income households

State home audit and retrofit programs which target low-income households include the NSW Home Power Savings Program and Victoria's Energy and Water Taskforce.

These programs provide an important service to low-income households, but have notable limitations such as:

[2] Fuel poverty is a contested term in Australia. In the United Kingdom it refers to a situation where a household 'needs to spend more than 10 per cent of its income on fuel for adequate heating' (DECC 2011).

- number of households serviced. With the exception of the Home Power Savings Program, existing programs targeting low-income households reach a relatively small proportion of the eligible population
- 'depth' of intervention. Few programs provide sufficient assistance to low-income households who want to undertake the more costly energy efficiency upgrades such as replacing electric storage hot water systems.

The NESI scheme has the potential to address these issues.

- NESI should provide an incentive for energy efficiency across large numbers of households in all states and territories.
- NESI should include support for more-expensive energy efficiency upgrades.

Energy hardship programs

Many energy hardship programs also provide energy audits and information. These programs play a valuable role for households facing difficulty paying their energy bills.

These energy hardship programs are, however, limited in reach. They focus on ensuring access to an essential service, which is different to the type of assistance envisaged from the NESI.

Rebate programs

While numerous rebate programs exist across the states and territories, many do not appeal to those households who have limited discretionary income or savings, because they require a substantial co-contribution from the householder.

Forthcoming programs targeting low-income households

Two forthcoming Commonwealth programs will also target low-income and vulnerable households:

- Low-Income Energy Efficiency Program
- Household Energy Sustainability Scheme

Both programs provide a fundamentally different function to the NESI scheme.

- The Low-Income Energy Efficiency Program will trial different energy efficiency measures and may lead to useful outcomes for future interventions. No ongoing funding is provided.
- The Household Energy Sustainability Scheme focuses on providing financial and energy advice rather than providing assistance with changes to energy efficiency hardware.

4 Choice of measures to address low-income households

Our responses to the main options for assisting low-income households as part of NESI are presented below.

Sub-obligation for low-income and vulnerable households

Sub-obligations, which require a proportion of savings to be made from a specific segment of the population, have been used successfully in the CERT (United Kingdom) and REES (South

Australia) schemes to address low-income households. In case of the CERT scheme there was an additional obligation to assist households at risk of fuel poverty.

Our response: We support this approach.

The mechanisms to address the needs of low-income households should include a sub-obligation to assist low-income households.

A sub-obligation should be proportionate to the size of the target group and the scope of the entire NESI scheme. A residential-only scheme might have an obligation to assist low-income households of between 30 to 40 per cent of all savings, whereas an economy-wide scheme would have a smaller obligation.

Whether a sub-obligation would lead to additional costs is unclear. In the case of VESI Phase 1, sub-obligation targets, if they existed, would have been easily met. Administratively they would require relatively little additional work.

As the NESI scheme develops, a sub-obligation would place pressure on obligated parties to innovate to meet the needs of vulnerable households rather than ignore them because they might cost more to recruit. Innovations that we would expect would include low interest finance targeting low-income households paying off a mortgage, with the potential for repayments to match the savings from the installed measure. Rather than being a burden, such an approach would stimulate innovation and increase the benefits from the scheme.

Financing mechanism

Consideration should also be given to the viability of on-bill financing and low interest loans as potentially affordable credit mechanisms to assist low-income households to access higher cost energy efficiency upgrades.

This approach would be unsuitable for some low-income households and those households in financial stress.

Multiplier for all products delivered in low-income households

One proposal to address low-income households is to provide a multiplier for all products delivered to these households.

Our response: We do not support this approach.

Using the blanket approach of a multiplier for all products delivered in low-income households would unnecessarily increase the entire cost of the program. This would occur even when there is no additional cost in delivering improvements to such households. For example, our analysis of the VEET scheme suggests there would be little or no additional cost recruiting and delivering light globes or showerheads to households in more disadvantaged areas.

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