



Home Insulation

For Those Who Need It



Canberra**liberals**

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Leadership on Climate Change

Home Insulation for Those Who Need It

The Canberra Liberals' policy for *Home Insulation for Those Who Need It* is a far-sighted plan to reduce the ACT community's greenhouse impact. This ground-breaking policy is also an important investment in equity and will ensure warmer, cheaper, more liveable housing for those who need it.

The Canberra Liberal Government will warm Canberra houses through a mass roll out of ceiling insulation for uninsulated and under-insulated homes in Canberra built before 1996. In our first four years in government we will deliver ceiling insulation to 9,800 households.


The insulation rollout will slash greenhouse gas emissions, while radically increasing the energy efficiency of all our housing stock. The initiative will also reduce household expenditure on energy and improve the quality of life for Canberrans living in poorly insulated homes.

Australia's Poor Record of Insulation

Across Australia, at least 40% of all houses have no insulation at all. The picture is better in the ACT, with only about 12% of houses completely uninsulated according to ABS statistics (ABS cat no. 4602.0 November 2005). However many of the houses with some insulation would not meet the current minimum standards.

The level of under-insulation in older Canberra houses is a product of market failure. It is a problem that will not be addressed quickly unless the government takes a leadership role. Market forces alone have failed to provide sufficient incentives or financial resources for every household to fix the problem by themselves.

- Poor insulation is rife in public housing and in low income households. These are the households with the least capacity to make an up-front investment in insulation.
- There are no incentives for people to minimise the external costs of their carbon emissions. People are conscious of their electricity and gas bills, but they do not pay the full costs from the carbon emissions associated with heating and cooling a home.
- People on middle-to-low incomes tend to favour short-term spending on consumption and living expenses, over investments in technology that will save money in the long run.



By retrofitted insulation in buildings it is possible to reduce some of the future demand for new energy production. It does not make either economic or environmental sense to invest billions of dollars in new power stations to heat and cool poorly insulated homes and office buildings. Canberra's future energy needs can be better managed, at a fraction of the cost, if we improve our existing energy consumption habits, rather than seeing new power stations as the only answer.

Stanhope Labor believes that insulation is a private matter, but at the same time it is backing the investment of millions of dollars in a gas fired power station in the ACT through its utility company Actew Corporation and its subsidiary ActewAGL.

Stanhope Labor's business-as-usual approach to energy policy is short sighted and contributes little to improving existing energy consumption behaviour.

Extent of the Problem in Canberra

Since 1995 houses in the ACT have been built to standards which required them to have effective insulation. However there are about 90,000 detached houses in the ACT built before 1995, most of which are not adequately insulated. And in government housing, insulation is particularly poor as a result of government neglect.

ABS surveys have indicated that between 75.8% to 80.4% of householders in the ACT believe that they have some degree of home insulation. The remainder of houses are without insulation or the residents do not know whether they have insulation. Furthermore some houses which have a form of insulation are so poorly insulated, as to be classed as uninsulated. Based on the ABS data, the Insulation Council of Australia and New Zealand has estimated that the number of uninsulated homes in the ACT in 2005 was around 22,000. This is equivalent to around 12% of homes.

Additionally there are many more homes that are under-insulated, for instance homes where the ceiling insulation is limited to some living areas and does not extend to the bedrooms.

Home Insulation

For Those Who Need It

Home Insulation for Those Who Need It will be a mass roll out of insulation that will be offered, in the first instance, to low-income occupants of uninsulated and under-insulated houses where installation is practicable (dwellings with conventional roof spaces).

The rollout will provide insulation for:

- ceilings which have no insulation;
- ceilings where the insulation coverage is patchy, for instance where there are cavities, voids or entire rooms which have not been covered in accordance with Australian Standards; and
- ceilings where the old insulation is substantially below Australian Standards for an alpine region.

Under Australian Standards home insulation should meet a level of performance that is appropriate to the climate of the relevant region. Canberra is regarded as an alpine region with extreme temperatures and accordingly a high standard of insulation is required in local homes. Insulation used in the rollout of ***Home Insulation for Those Who Need It*** will be at an “R-value” of at least 4.0 (the “R value” or “thermal resistance” is a measure of resistance to temperature change, with higher values indicating a superior performance).

Implementation

The roll-out of ***Home Insulation for Those Who Need It*** will commence in government housing and in houses occupied by people on low incomes. It will commence with a first phase pilot of about 100 private houses in the first half of 2009, followed by 300 private houses and 300 government houses in the second half of the year to refine the model for delivery of the rollout and to allow training of staff. The pilot phase would also provide sample information on the extent of insulation and under-insulation.

The annual rollout will increase to 1,400 private houses and 2300 public housing properties per year from 2010-11.

A Canberra Liberal Government will aim to insulate the ceilings of at least 9,800 households occupied by low income Canberrans in the next four years. The rollout will include a variety of building structures including freestanding houses, townhouses and some apartments with accessible roof spaces.

Number of Households to be Insulated

	2008-09 No. of ceilings	2009-10 No. of ceilings	2010-11 No. of ceilings	2011-12 No. of ceilings	Total No. of ceilings
Private	100	1,000	1,400	1,400	3,900
Public	0	1,300	2,300	2,300	5,900
Total	100	2,300	3,700	3,700	9,800

During the rollout there would be:

- 1) a letterbox drop alerting residents to the program;
- 2) visits from assessor who would -
 - check householder eligibility,
 - measure up the insulation requirement,
 - provide information on other measures to improve the efficiency of the house such as weather sealing and window treatments, and
 - provide information about other programs aimed at assisting people cut their energy use and cost of running their homes; and
- 3) the insulation phase.

A Canberra Liberal Government would aim to roll out **Home Insulation for Those Who Need It** to a substantial number of pre-1995 houses with conventional roofs which are uninsulated or under-insulated. Some roofs such as flat metal roofs and raked ceilings with limited access will present problems and during the pilot stage there will be an assessment of how to cost-effectively accommodate some of these houses in the rollout programme.

Funding for Home Insulation

The cost of roof insulation for a standard house with a conventional roof space, as part of a mass roll out, is around \$1200. This represents an average of the cost including assessor costs, rollout to under-insulated houses where only partial ceiling insulation is required and insulation of houses where complete ceiling insulation is required. This cost is less for small townhouses and small houses such as “ex-govie” housing.

Many of the pre-1995 houses that need ceiling insulation have a smaller size than the average Canberra house.

The rollout of **Home Insulation for Those Who Need It** will be supported by a total investment of \$10.6 million in new funding over the first term of a Canberra Liberal government. Further, administrative costs for contacting households will be met by redirection of existing agency funding.

Funding for the Home Insulation Program

	2008-09 \$000	2009-10 \$000	2010-11 \$000	2011-12 \$000
Private homes	120	1,200	1,490	1,540
Public housing		1,450	2,370	2,440
Total	120	2,650	3,860	3,980

The ACT Government has currently allocated around \$2.3 million per year for the next 10 years to improve the energy efficiency of ACT government housing. The Canberra Liberals will focus \$6.3 million from this program on building insulation over the next three years, in recognition that this investment generates the greatest energy savings.

We will augment that amount with a further investment of \$4.4 million which will be directed towards Canberrans who own their own homes, commencing with a rollout to low income households.

Saving both Households and the Environment

Home Insulation for Those Who Need It will deliver immediate and ongoing savings in the form of reduced energy consumption.

- The Insulation Council of Australia and New Zealand estimate that in houses with space heating, the average payback period for insulation in the ACT is only three years. An extremely high proportion of ACT houses have some form of heating, because of our extreme climate.
- Insulation continues to deliver ongoing savings for home owners for the life of the building and it provides other benefits that are hard to quantify such as reduced health costs and enhanced comfort. The average yearly benefit in the ACT is estimated at \$344 per house from energy savings alone. This estimate has been tested by a number of advanced modelling tests.

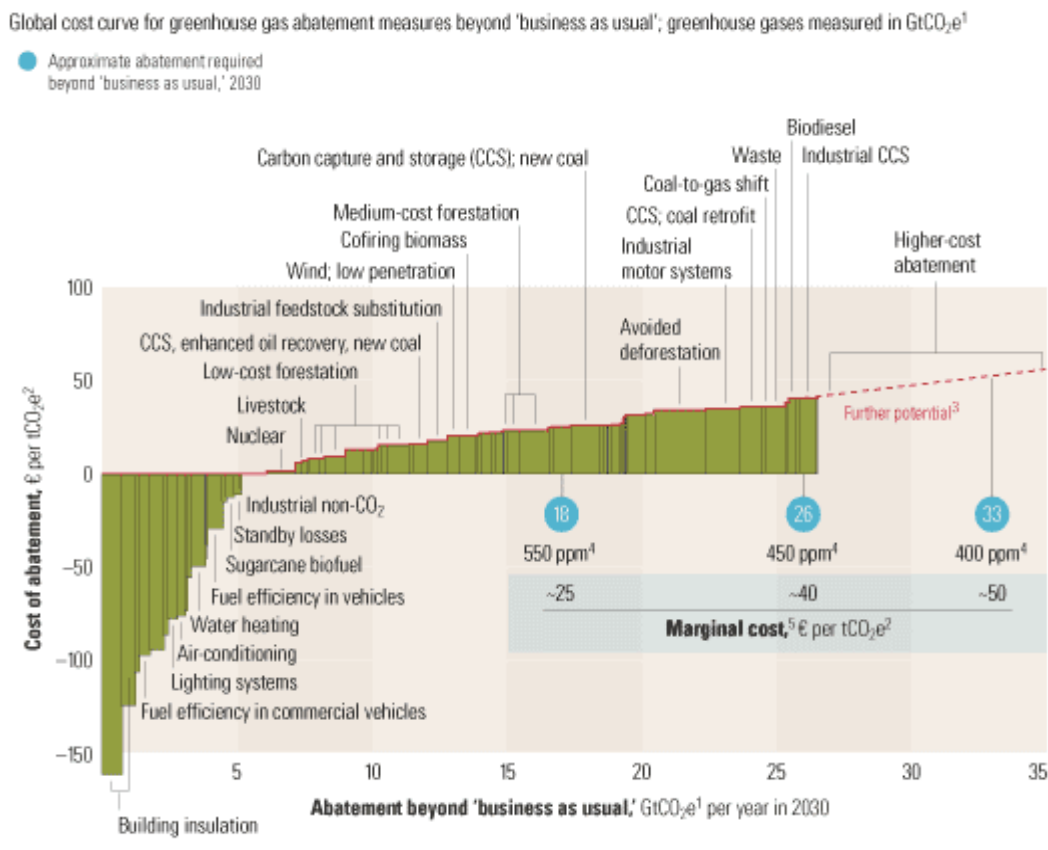
Conversely, if a building remains uninsulated over a projected life of 60 years, then the householder will have unnecessarily paid energy costs equivalent to the cost of insulation at least 12 times over.

It is estimated that in the first four years of a Canberra Liberal Government, **Home Insulation for Those Who Need It** will deliver emission savings of 37,904 tonnes of CO₂ and a saving of 291 million megajoules of energy. This equates to a total reduction in electricity bills of \$11.5m over four years based on current electricity prices.

	2008-09	2009-10	2010-11	2011-12	Total Saving over 4 years
No. of ceilings	100	2,300	3,700	3,700	
Cumulative ceilings	100	2,400	6,100	9,800	
CO ₂ -e Saving (tonnes)	206	4,944	12,566	20,188	37,904
Energy Saving (Megajoules)	1,583,900	38,013,600	96,617,900	155,222,200	291,437,600

A study published in the McKinsey Quarterly has compared the cost of alternative solutions for the abatement of greenhouse gas. The study found that building insulation was the cheapest form of energy efficiency, delivering greenhouse gas reduction for the greatest possible return on investment (see figure 1 on next page).

Figure 1: Cost curve for greenhouse gas abatement measures



¹ GtCO₂e = gigaton of carbon dioxide equivalent; "business as usual" based on emissions growth driven mainly by increasing demand for energy and transport around the world and by tropical deforestation.
² tCO₂e = ton of carbon dioxide equivalent.
³ Measures costing more than €40 a ton were not the focus of this study.
⁴ Atmospheric concentration of all greenhouse gases recalculated into CO₂ equivalents; ppm = parts per million.
⁵ Marginal cost of avoiding emissions of 1 ton of CO₂ equivalents in each abatement demand scenario.

Source: "A cost curve for greenhouse gas reduction", *The McKinsey Quarterly*, February 2007

Eligibility

Home Insulation for Those Who Need It is primarily an environmental initiative aimed at cutting greenhouse gas emissions. Additional benefits include reduction in the energy consumption and reduction in the cost of running individual households.

The energy industry expects that electricity and gas costs will spiral significantly in coming years. This will place a particular strain on low income households.

The initial roll out of the Canberra Liberal insulation program will be targeted towards low income householders, because they stand to gain the greatest benefit from reduced energy expenses. This policy is good social policy and good environment policy. During the first phase of the **Home Insulation for Those Who Need It**, priority will be given to low income home owners such as pensioners, veterans, Commonwealth Seniors Health Card holders, carers and young families.

These priority groups include people who are among the most vulnerable to sickness and who will obtain the greatest health benefits from home insulation (for instance reduction in respiratory illness).

- Residents in public housing and community housing will be the main beneficiaries of ***Home Insulation for Those Who Need It*** during the first four years of the policy rollout, with around 5,900 dwellings to receive ceiling insulation.
- Pensioners, veterans, Commonwealth Senior Health Card holders, who own their own home will be a priority group in the first stage of the rollout to private homes. This group will include a number of pensioners and retirees who own their own home, but who do not have the income stream anymore to support investment in retrofitting.
- Other low income earners who own their own home will also be given priority, such as careers and people on disability pensions.
- Home owners who qualify for Family Tax Benefit A will also qualify for the rollout, but the rollout will not be extended to this group until there is a plateau in demand from the other priority groups.

As the rollout continues and demand from low income households tapers away, the mass roll out of insulation will extend to other pre-1995 houses that have uninsulated or under-insulated ceiling, irrespective of ownership. The goal of the program is to rectify all substandard ceiling insulation in Canberra homes by 2016.

Rental Properties

The Commonwealth Government has assumed a responsibility for assisting landlords to fund the insulation of rental properties. In the 2008/09 budget the Commonwealth Government announced a rebate for landlords of up to \$500 per house, for the insulation of rental properties.

We welcome this investment and will work cooperatively to assist the Commonwealth with implementation of the policy. A Canberra Liberal Government will enter into negotiations with the Commonwealth to offer implementation of their scheme through the delivery mechanism of the teams which are installing ***Home Insulation for Those Who Need It***. This cooperation can improve economies of scale and would enable a more systemic approach to rollout across suburbs.

Any rollout under the Commonwealth program will be additional to the estimated 9,800 dwellings retrofitted under the ACT scheme for owner-occupied housing and public housing.

Employment

Home Insulation for Those Who Need It will be a major source of new, green jobs in the ACT. We estimate that when fully operational, the scheme would

provide about a number of new jobs, ranging from lower skilled installer positions to higher skilled assessor positions. The scheme will be administered through contractors. Through competitive tenders we will secure existing industry expertise, we will obtain value for money and we will ensure accountability in the contracts for delivery of the program.

There is strong industry support for such government investment, as evidenced in proposals put to government by the Insulation Council of Australia and New Zealand.

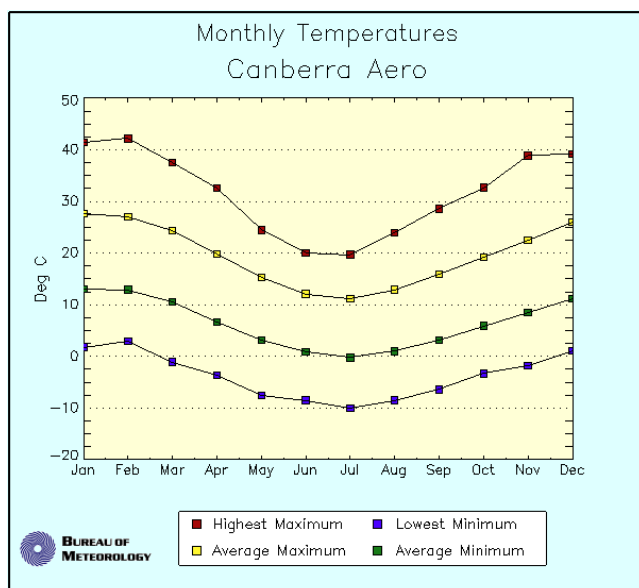
The Environmental Benefits of Home Insulation

Good insulation is the most cost effective way of cutting greenhouse gas emissions domestically, so it's the best place to start meeting our greenhouse targets. Unlike many other carbon-abatement strategies, it provides a continuing benefit (for the life of the building) with no future costs – in fact it will save householders money into the future.

The rollout of **Home Insulation for Those Who Need It** will be targeted initially at low income households which can least afford the cost of home insulation. At a broader level the policy will help the whole ACT reduce its overall greenhouse gas emissions.

The ACT has a wide variation in temperature (see figure 2 below). As Australia's largest inland city, we suffer very cold winters and very hot summers. There is therefore strong reliance by Canberrans on domestic heating and cooling systems, to manage the extremes of temperature. Around 98 per cent of homes in the ACT have some form of installed heating or cooling system. There are also a number of houses which have portable heaters and electric fans. Effectively almost all homes in the ACT depend upon heating or cooling systems of some form or another.

Figure 2: Canberra Average Monthly Temperatures

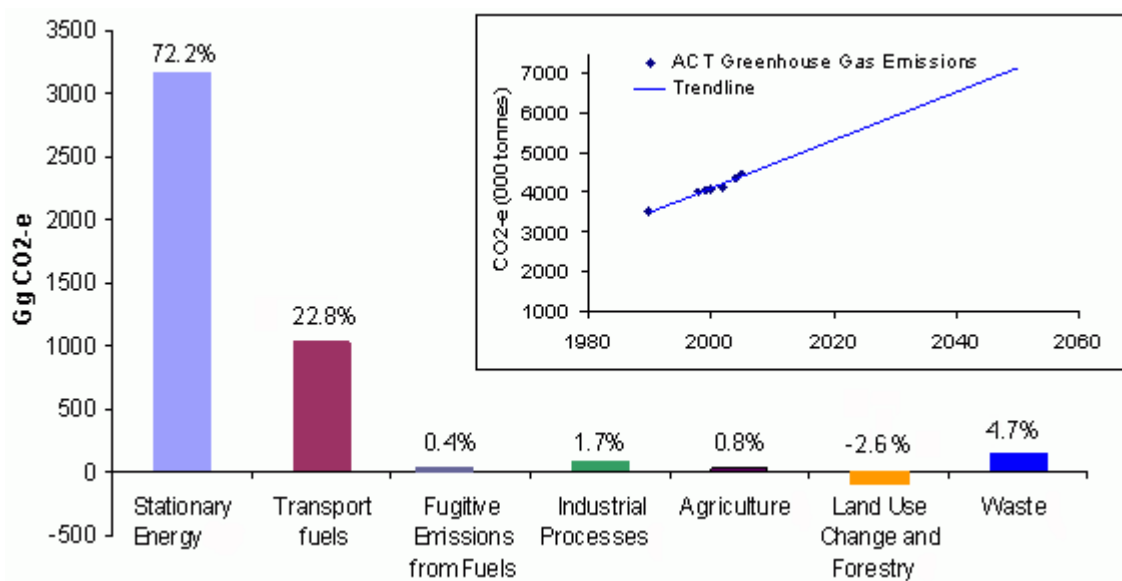


Source: Australian Bureau of Meteorology

Heating and cooling systems consume vast amounts of energy. Over 72.2% of energy used by Canberrans is for stationary purposes – that is to heat, cool and light homes, offices and other buildings. The 2007 State of the Environment Report reveals that the ACT is one of the country's largest per capita emitters.

Figure 3 below shows the extent to which ACT greenhouse gas emissions come from stationary energy sources and the extent to which ACT emissions are rising.

Figure 3: ACT greenhouse gas emissions



Source: TAMS, Climate Change Policy Unit (published in SOE Report 2007)

The Commissioner for the Environment recently reported that:

“The ACT currently emits approximately 4.45 million tonnes of CO₂-equivalents per year, which amounts to about 13.7 tonnes per year per person. The Territory's per capita emissions have increased by nearly 10% since 1990. Total emissions are growing for two reasons: population growth and increased energy use per household. Emissions are likely to continue to increase if there is no change to current practices.” (ACT State of the Environment 2007)

Energy-efficient, cheaper-to-run homes

Insulation improves energy efficiency, reduces energy waste and cuts running costs in buildings. Cuts in the cost of heating will be of greatest benefit to lower-income households, which spend a bigger proportion of their income on utilities bills. With rising energy costs, the saving can only grow over time. **Home Insulation for Those Who Need It** will reduce the running costs of many of Canberra's homes.

The Health Benefits of Home Insulation

Effective insulation can improve comfort and health in the home. Cold houses are more prone to humidity, condensation and rising damp. These conditions can lead to growth of moulds and can aggravate respiratory problems.

Research conducted in New Zealand involving 1,350 homes and 4,407 people found a significant benefit from retrofitting homes with insulation. Researchers randomly assigned houses between a control group and a group of houses that were insulated. The study was reported in the *British Medical Journal* and concluded that:

“insulating existing houses led to a significantly warmer, drier indoor environment and resulted in improved self rated health, self reported wheezing, days off school and work, and visits to general practitioners as well as a trend for fewer hospital admissions for respiratory conditions.”

The evidence from the insulation experiment in New Zealand shows that home insulation resulted in adults taking fewer days off work and children having fewer days off school.¹ After the insulation rollout, there was a significant decrease in residents reporting dampness and mould.

There was also a reduction in energy use during this study, with 3899 kWh equivalent consumed by insulated households compared to 4941 kWh of energy consumption in the control group.

Home Insulation for Those Who Need It will make our houses warmer in winter and will therefore help reduce respiratory disease.

Home Insulation for Those Who Need It is good for the environment, good for household expenditure and good for people’s health. This policy is a win-win-win initiative from the Canberra Liberals.