



The Efficient Building Scheme

Improving energy efficiency is not only the fastest way to reduce our greenhouse gas emissions, but it saves us money while we do it. That's why four of the Greens' twelve Safe Climate Bills are directed towards saving energy.

The Efficient Building Scheme bill targets the huge potential for energy savings in commercial (non-residential) buildings such as office blocks, shopping centres and hotels. It would cap energy efficiency across the various building types, bringing it down over time, and allowing owners and operators of more efficient buildings to sell credits to those who are less efficient.

The scheme, based on a proposal developed by Lend Lease, WSP Lincolne Scott and Advanced Environmental, would provide a long-term investment signal to building owners, reward early movers and drive predictable change with a fair carrot and stick approach. It will seize the huge environmental, social and economic benefits of upgrading Australia's commercial buildings to be energy efficient – saving money for businesses and making a big dent in greenhouse pollution.

This Bill, called the Safe Climate (Energy Efficient Non-Residential Buildings Scheme) Bill 2009 has already been introduced into the Senate and been the subject of a Senate inquiry. The Greens will ensure that the Bill is debated and voted on in the next term of Government.

Why complimentary policies on energy efficiency are needed

In order to play our fair part in avoiding catastrophic climate change, Australia needs to build a zero emissions economy as fast as possible, cutting our emissions to at least 40% below 1990 levels by 2020 on the way. Improving energy efficiency is the cheapest, fastest way to substantially reduce greenhouse gas emissions and is fundamental to all climate change mitigation strategies.

This is true in all countries, but especially in Australia, where our inefficient use of energy, combined with the fact that our electricity is generated mostly from coal, means that Australia's economy is very greenhouse intensive: one of the most greenhouse gas intensive of any developed economy in the world. While this is a risk for our economy, it also presents an opportunity because every gain in efficiency gives us a larger cut in emissions than most other OECD countries.

The Efficient Building Scheme



In fact improving energy efficiency is better than cheap, it saves money – and these savings offset the cost of other more expensive emission reductions. According to McKinsey&Company:

“Significant quantities of ‘negative-cost’ opportunities are available. These opportunities would allow Australia to reduce emissions in 2020 by 20 percent below 1990 levels at no net cost to the economy. This is because the contribution to the economy of the negative cost opportunities is enough to pay for the other abatement measures up to a marginal cost of \$62 per tonne CO₂e, representing 270Mt of abatement. For 2030, an equivalent analysis suggests reductions of 35 percent are achievable at no net cost.”

Unfortunately, our relatively cheap electricity has meant that energy efficiency has not been prioritised. This lack of prioritisation, combined with a lack of information and the relatively large upfront costs, means that the huge potential benefits of energy efficiency have been barely tapped.

Whilst the Greens see carbon pricing policies such as emission trading or a carbon tax as key to that transformation, it is widely acknowledged that complementary policies are needed to drive expansion in renewable energy generation and the systematic exploitation of energy efficiency. Indeed it is likely that these complementary measures, particularly those which drive improvements in energy efficiency, will be more effective than carbon pricing in reducing greenhouse gas emissions for the next several years.

Carbon pricing will not be sufficient to drive energy efficiency because cost is not the main barrier. If it were, much more would already have been done, since efficiency clearly saves money fast. The key barriers to energy efficiency include:

- high upfront costs;
- low priority and apathy due to the low costs of electricity;
- lack of information about the options;
- a disconnect between those making decisions about energy efficiency investments and those paying the electricity bills.



The Efficient Building Scheme

In addition to its role in reducing greenhouse gas emissions, energy efficiency is also critical to reduce the need to invest in ever more electricity infrastructure – \$42 billion of investment either approved or proposed over the next five years.

In June last year US President Obama talked about “technologies that are available right now or will soon be available”, which can “make our buildings up to 80 percent more energy efficient”.

According to conservative research published by the Australian Sustainable Built Environment Council (ABSEC):

- Electricity demand in residential and commercial buildings can be halved by 2030, and reduced by more than 70 per cent by 2050 through energy efficiency;
- Energy efficiency alone could deliver savings of 30–35 per cent across the whole building sector, including the growth in the overall number of buildings, out to 2050;
- Energy savings across the entire the building sector could reduce the costs of greenhouse gas abatement across the whole economy by \$30 per tonne, or 14 per cent, by 2050;
- By 2050, GDP could be improved by around \$38 billion per year if building sector energy efficiency is adopted, compared to previous economy-wide estimates of the 60 % deep cuts scenario.

Failure to respond to the tremendous potential presented by energy efficiency is a major weakness of the Government’s approach to climate change.

Information provided to a Senate inquiry by Szencorp highlighted that Government statements to the UN Framework Convention on Climate Change indicate it believes that improving energy efficiency across all sectors could result in savings of just 3Mt per annum by 2020. Contrast this to estimates from McKinsey & Co – about 50 Mt and ASBEC – 39–45Mt, both by 2020. Considering that the savings identified by just 165 companies in the first round of the Energy Efficiency Opportunities report amount to 4.7Mt, it is clear that the Government just doesn’t understand or has chosen not to calculate the real potential of energy efficiency for greenhouse gas reduction.

The Efficient Building Scheme



How the Energy Efficient Non-Residential Buildings Scheme would work

The scheme would have four main steps:

1. Building owners will report the energy and carbon intensity of their base building, measured as greenhouse gas emissions per square metre. We envisage that the scheme would start with large office buildings (say those with a net lettable area greater than 5,000m²), with smaller office buildings and other building types (such as hotels, hospitals, retail centres, schools, etc) being phased in over a few years.
2. Once two years of data on the building energy and carbon intensity is received, the Minister would then set an intensity cap for each building type, each year for 10 years, probably starting with the average intensity for a city or region. This would vary by city or region due to local climatic conditions impacting the average. As with emission trading schemes, the cap would decline predictably over time.
3. The scheme administrator will then allocate tradable certificates, each worth one tonne of greenhouse gas (known as CO₂equivalents), to each participating building owner, up to the cap. In other words the number of certificates each building owner would receive would be determined by the emission intensity cap for their building type multiplied by the size of their building.
4. A trading mechanism would then allow building owners to buy and sell the tradable certificates. Owners of buildings which are more efficient than the cap will be allocated more certificates than they actually need, so these can then be either banked or sold to owners of relatively inefficient buildings. In this way the owners of all building types will have a long-term and predictable financial incentive to improve energy efficiency. Non-compliant building owners will face a shortfall penalty which in effect will act as a safety valve on the cost of the efficiency certificates.

The Efficient Building Scheme



The primary advantages of the scheme are that:

1. It is mandatory rather than voluntary for the building owner, thus leading to the systemic upgrade of all of Australia's non-residential buildings. The scheme requires that many thousands of participants seriously apply themselves to the question of improving efficiency;
2. It creates both incentives for action and penalties for inaction, in other words it can be characterised as a carrot and stick approach;
3. In addition to creating an incentive to upgrade a building itself, including heating and cooling solutions for example, the scheme also creates an incentive to reduce energy consumption by changing behaviour;
4. The price signal created by the scheme is long term and predictable, increasing investment confidence;
5. It rewards early movers, advantaging those who have already undertaken improvements in energy efficiency; and
6. It requires the disclosure of energy and carbon performance information which in itself will improve the awareness of many building owners and tenants and motivate improvements especially when coupled with minimum standards for Government tenancy.
7. It will stimulate job creation and investment in innovative solutions – clean energy products and materials.

Embracing energy efficiency across Australia

The Greens have a four Safe Climate Bills dealing with energy efficiency – including Bills which deal specifically with the residential and the industrial sectors. More information about the Efficient Building Scheme, the other energy efficiency Bills and the range of Safe Climate Bills seeking to introduce a price on carbon, promote renewable energy, cleaner transport and protecting and enhancing carbon in forests is available at www.safecclimatebill.org.au