



Australian Institute of Architects

30 October 2009

Mr John Hawkins
Committee Secretary
Senate Economics Committee
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Mr Hawkins,

Inquiry into the Safe Climate (Energy Efficiency Non-Residential Buildings Scheme) Bill 2009

The Australian Institute of Architects (the Institute) welcomes the opportunity to comment on the Safe Climate (Energy Efficient Non-Residential Buildings Scheme) Bill 2009 (the bill).

The Institute is an independent, national, member based organisation with approximately 9,700 members. The Institute actively works to improve the quality of our built environment by promoting quality, responsible and sustainable design.

The building sector can make a substantial contribution to efforts to reduce Australia's greenhouse gas emissions. This is well documented in the ASBEC report *The Second Plank – Building a Low Carbon Economy with Energy Efficient Buildings*, published in September 2008.

The Institute welcomes the climate change abatement objectives sought through the introduction of the proposed Safe Climate Bill however we do not support the mechanism proposed (a mandatory cap and trade scheme for buildings), to achieve that objective. The Institute would prefer to see mechanisms implemented such as those outlined in the *Second Plank* report. These mechanisms are a combination of policy settings including; incentives, voluntary schemes and increased minimum standards through regulation.

We believe incentives to change behaviour and encourage investment in energy efficient measures are more efficient mechanisms to achieve the dual goal of reducing greenhouse gas emissions and lessening the economic impact of the measures.

The Second Reading Speech for the Bill outlined perceived limitations with white certificate schemes. We believe a national, harmonised scheme of white certificates will be effective over time as both consumers and industry embrace such a scheme and reduce their ongoing energy costs in light of the anticipated electricity price rises under the Australian Government's proposed Carbon Pollution Reduction Scheme.

Further information which provides background both to the contribution the building sector can make to reducing greenhouse gas emissions, and to support our position calling for five key energy efficiency measures to be introduced follows. This information formed the basis of our submission to a Senate inquiry held earlier this year on climate change policy.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'D Parken', with a long horizontal flourish extending to the right.

David Parken, LFRAIA
Chief Executive Officer



Australian
Institute of
Architects

Submission to the Senate Economics Committee inquiry into the Safe Climate (Energy Efficiency Non- Residential Buildings Scheme) Bill 2009

The Australian Sustainable Built Environment Council (ASBEC)

The Institute is a member of the Australian Sustainable Built Environment Council (ASBEC), a peak body of key national organisations committed to a sustainable built environment in Australia. Through its Climate Change Task Group (CCTG) ASBEC commissioned economic analysis from the Centre for International Economics to assist the CCTG in its effort to stimulate discussion about the complementary role that energy efficiency can play supporting the Australian Government's proposed Carbon Pollution Reduction Scheme (CPRS). The Centre for International Economics' analysis resulted in a report published in September 2008 *'The Second Plank - Building a Low Carbon Economy with Energy Efficient Buildings'* (the Second Plank) which forms the basis of this submission.

The Building Sector's contribution to greenhouse gas emission (GHG) abatement

The building sector comprises two elements: residential buildings –housing the population; and commercial buildings – covering a range of activities including; retail trade, accommodation, businesses services, government and government agencies, recreation, cultural services and industry.

The building sector's contribution to GHG is mainly driven by its end use of, or demand for, energy mainly through consumption of electricity and gas. Energy consumption by the building sector amounts to 19 per cent, and taking into account both the amount of energy used in the building sector and different fuel types, the *Second Plank* report found that 23 per cent of Australia's greenhouse gas emissions are attributable to the building sector. That is, energy use from activities within buildings is the source of demand which, when met, produces nearly a quarter of national greenhouse gas emissions.

Of course, the electricity consumed within a building is only part of the energy used to support that demand. A large amount of electricity and greenhouse gas emissions is also involved in the distribution, transmission and generation.

In addition, the report does not include data on the greenhouse gases emitted during the material production and building construction phases, nor does it take into account the embodied energy within the building's materials. The Institute acknowledges that further work is needed in these areas and that there would be benefit from research and development in the environmental rating of materials. For example, establishing a national metric database that records the 'embodied energy', 'embodied carbon' and 'embodied water' to allow comparison between materials.

Key findings of the Second Plank report

Within the building sector, significant savings in GHG emissions can be achieved through the employment of energy efficiency measures using today's existing technology. These GHG savings are economic, involving little or no net economic cost.

Of significance, the ASBEC report calculates that:

- Without complementary measures the building sector is expected to reduce emissions by around 8Mt a year from the price signal received from the CPRS (that is, increased electricity prices), and
- With complementary measures and encouragement to achieve the full energy efficiency potential of the building sector, GHG savings of around 60Mt per annum are achievable in the longer term, (by 2030),
- Investment in energy efficiency in the building sector has the potential to reduce the sector's GHG emissions between 30-35% by 2030.

However a number of institutional barriers and market failure have prevented the building sector from realising this potential. A core problem is the gap in time between the cost of making the substantial investment required to bring about efficiencies, and the time when the energy efficiency savings provide a return. The *Second Plank* discusses these barriers and impediments to the building sector reaching its abatement potential.

Five Key Energy Efficiency Measures

While it is acknowledged that Australian and State/Territory Governments are attempting to address barriers to the adoption of energy efficiency measures, it is clear that additional policy effort is still required.

The *Second Plank report* identifies 21 additional policy approaches to stimulate energy efficiency in the building sector and greenhouse gas abatement. These policies, which are discussed in more detail in the attached report, consist of a mix of incentives, regulation and government financial assistance for energy efficient investment.

Of these 21 policies, five are highlighted in the report as key to motivating the long term structural change and significant investment required to achieve greater energy efficiency in the building sector.

These five policies include:

- a national white certificate scheme,
- green depreciation,
- public funding of energy efficiency retrofits
- enhancement of Minimum Energy Performance Standards (MEPS) and
- modernising the building code with higher standards.

Green Depreciation

In light of the global economic situation, the Institute believes that green depreciation should be introduced as a matter of priority.

Green depreciation involves the provision of accelerated depreciation allowances for capital expenditure on refurbishments that 'green' existing commercial buildings, ie, expenditure on energy efficient fittings, fixtures and capital works that raise the overall energy performance of the building to a specific standard. Green depreciation would play a key role in overcoming the timing gap problems, allowing investors to defer tax payments in exchange for bringing forward energy efficiency and greenhouse gas reductions.

During Australia's recession in the early 1990's, accelerated depreciation was successfully used as a tool to stimulate economic activity. Introducing accelerated green depreciation would logically build upon past history, by serving a dual purpose, not only would it stimulate economic activity, generating employment etc, but it would also reduce building sector greenhouse gas emissions.

National White Certificate Scheme

In essence, a white certificate scheme enables energy efficiency to be a tradable asset which would provide an incentive for the building sector to invest in additional energy efficiency. Several states are in the process of implementing variations of a white certificate scheme however a national scheme that applies to the residential and commercial elements of the building sector could minimise differences and enable a broad market on a larger, more efficient scale.

Public funding of energy efficiency retrofits

Public funding of energy efficiency retrofits will require a range of financial assistance mechanism, eg, grants, subsidies, and rebates for improvements undertaken by households and the commercial sector which have a proven ability to reduce energy consumption.

Public funding of retrofits reduces the investment cost for energy consumers therein closing the 'payback' gap and providing additional incentive to undertake investment in energy efficiency.

Increase Minimum Energy Performance Standards (MEPS)

An increase in minimum standards for energy efficiency of appliances through MEPS would accelerate energy efficiency gains. Appliance standards are one of the most cost effective and widespread instruments for increasing building energy efficiency and are necessary to gradually remove the least energy efficient products from the market.

Building Code Modernisation

Building codes are an important driver for improved energy efficiency in new buildings. The Building Code of Australia needs to be updated and tightened with higher standards for energy efficiency achieved through design, selection of building materials and installation of efficient heating, cooling and lighting systems.

Benefits

The Second Plank report clearly demonstrates that there would be substantial benefits to the whole economy from investing in the energy efficiency potential of the building sector.

The analysis shows that with less demand for electricity as a result of investing in the energy efficiency potential of the building sector, the price for emission permits would be lowered by around 14%.

It is also estimated that in fully realising the building sector's potential, the saving to the economy, annually, will be around \$38billion by 2050 – that is, it reduces the economy adjustment costs foreshadowed in the CPRS Green Paper.

Conclusion

The Institute is pleased to provide this submission to highlight the significant contribution the building sector can make to Australia's greenhouse gas challenge, with the right policy settings in place.

We believe that Australia's solution to greenhouse gas emission reduction must consist of a series of measures, complementary to an emissions trading scheme, and that greater environmental outcomes can be achieved when the emissions trading scheme is not solely relied upon.

Indeed as stated earlier, within the building sector, significant savings in GHG emissions can be achieved through the employment of energy efficiency measures using today's existing technology. These GHG savings are economic, involving little or no net economic cost and if the potential abatement in the building sector is realised through complementary policy measures, the cost of carbon permits in the CPRS could be reduced by 14%. In undertaking this action, the whole economy can benefit through a reduction in the cost of permits under the CPRS and through lowering of the adjustment costs across the economy.

The Institute calls for the introduction of the five policies highlighted earlier:

- a national white certificate scheme
- green depreciation
- public funding of energy efficiency retrofits
- enhancement of Minimum Energy Performance Standards, and
- modernising the building code with higher standards

The Institute also strongly supports the principle of national consistency as a fundamental foundation for which the whole carbon pollution reduction strategy should be built.

To demonstrate our commitment to sustainability the Institute has over the last 14 years developed an Environmental Design Guide (EDG). EDG provides over 250 refereed papers providing the industry with a toolkit to achieve energy efficiency outcomes based on known knowledge.

The Institute's Members are prepared to play their role in designing buildings incorporating this knowledge, to maximise the sustainability of our built environment.