

To the Garnaut Review Secretariat,

Please find my submission for the “Issues Paper - Forum 5 Transport, Planning and the Built Environment”.

#### **4.2 Lower emission opportunities in buildings**

[...]

“Many authors have identified significant opportunities for mitigation in the building sector using current technologies which, based on engineering estimates, would appear to be cost-effective.”

**Submission comment:** Cross-disciplinary climate change mitigation and adaptation studies for Australia and New Zealand have demonstrated the local and direct cost effectiveness of retrofitting buildings for both the purpose of reducing GHG emissions and to adapt to projected increases in temperatures and other climate changes\*.

#### **4.3 Barriers to lower emission opportunities in buildings**

[...]

“As with transport, the lack of a price on greenhouse gas emissions may reduce the incentive for individuals and firms to reduce their building-related emissions. While an ETS would address the barrier of a lack of a price on carbon emissions, the Forum heard arguments that a number of other barriers to low emission opportunities in the building sector may need to be addressed.”

**Submission comment:** An ETS does not have to be the only economic instrument to addressing the lack of price on greenhouse gas emissions. It appears premature to exclude or omit to mention other options to address externalities from greenhouse gas emissions. For example, a number of EU countries use both emissions trading and taxation. Many authors argue that energy and carbon tax energy taxation needs to be high and sustained for many years to impact significantly on demand. That it is possible to do both is illustrated by the example of Denmark, which has maintained energy taxation at a level that roughly doubles domestic energy costs since shortly after the OPEC oil embargo of the early 1970s\*\*.

#### **4.3 Barriers to lower emission opportunities in buildings**

[...]

“The speed of change in emissions arising from energy used in buildings may be limited. The effective life of buildings and appliances varies, but some buildings are long-lived and changes to the whole building stock take place gradually.”

**Submission comment:** The combination of a rapidly growing and currently largely inefficient buildings stock with slow rates of change and replacement makes the building sector a very probable liability for Australia in meeting greenhouse reduction targets. International studies suggest that in order to meet national emission target aggressive policies, potentially including premature demolition of severely inefficient building stock, may be required and indeed should be considered when evaluating the full range of options and scenarios for avoiding dangerous levels of climate change (e.g. the “40% house” study in the UK).

#### **4.3 Barriers to lower emission opportunities in buildings**

[...]

“What policies would be appropriate to overcome barriers to low emission opportunities in the building sector, such as split incentives and information gaps?”

**Submission comment:** Mandatory disclosure of greenhouse performance at the point of sale could play a major role in overcoming the split incentive and information gap barriers. The development of the National House Energy Rating Scheme to include energy end uses for mandatory disclosure (i.e. ANZHERS) may be an effective instrument to address these barriers.

It should also be noted that there is currently a lack of monitoring data of energy end uses in the building stock to underpin accurate benchmarking and for informing policies for both residential and commercial buildings.

\* See: "An Assessment of the Need to Adapt Buildings for the Unavoidable Consequences of Climate Change" by Amitrano *et al.* (2007) on

[www.greenhouse.gov.au/impacts/publications/pubs/buildings-report.pdf](http://www.greenhouse.gov.au/impacts/publications/pubs/buildings-report.pdf) and "An Assessment of the Need to Adapt Buildings in New Zealand to the Impacts of Climate Change" by Bengtsson *et al.* (2007) on

<http://www.branz.co.nz/branzltd/publications/pdfs/SR179.pdf>

\*\* See: "Addressing the challenges of climate change for the built environment" in Building Research & Information (2007) 35(4), 343-350

Kind regards and thanks for your attention,  
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