



Government of South Australia

Department of Environment
and Natural Resources

2011 REVIEW OF THE CLIMATE CHANGE AND GREENHOUSE EMISSIONS REDUCTION ACT 2007

SUBMISSIONS RECEIVED

Adelaide City Council

Adelaide City Council
ABN 20 903 762 572
25 Pirie Street, Adelaide
GPO Box 2252 Adelaide
South Australia 5001
Tel 08 8203 7203
Fax 08 8203 7575
www.adelaidecitycouncil.com

Enquiries: Adrian Stokes – 8203 7723
Reference: ACC2011/180550

31 October 2011

Ms Stephanie Ziersch
Executive Director
Sustainability and Climate Change Division
Department of the Premier and Cabinet
Level 17, Education Building
31 Flinders Street
ADELAIDE SA 5000

Dear Stephanie,

Thank you for the opportunity to comment on the Review of the Climate Change and Greenhouse Emissions Reduction Act 2007 (CCGER Act).

Due to Council's reporting timelines there was insufficient time to have Council endorse a submission, therefore this submission has been prepared by Administration staff and is based upon existing Council policies and positions in the following documents:

- Energy Management Action Plan 2011-2014
- Climate Change Adaptation Action Plan 2011-2013
- Feedback on the draft Climate Change Adaptation Framework for South Australia (March 2011)
- Green City Sector Agreement (signed April 2010 by the Premier and the Lord Mayor)

In general terms, the Green City Sector Agreement is providing a useful framework for cooperation between Council and the State Government on climate change mitigation and adaptation and other sustainability initiatives.

Some specific comments follow.

Targets

Council considers the setting of greenhouse gas emission targets to be an important step in achieving reductions. This was reinforced by Council successfully achieving the target of 60% reduction in carbon emissions that was set in the Carbon Neutral Council Action Plan 2008-2012. Council has now re-set its corporate carbon emission targets in the recently adopted Energy Management Action Plan 2011-2014 (EMAP).

Council has also committed to the establishment of a community greenhouse gas reduction target for the City of Adelaide, through the following action in the EMAP:

"Action 6.1: Establish a greenhouse gas emissions target for the City in conjunction with the State Government."

Council considers this to be an important early step in determining priority actions and developing productive partnerships in the City.

The need for complementarity of national, State and sectoral actions, and the potential non-complementarity of sectoral targets, is acknowledged. However, Council remains committed to joint target setting, and the retention of some form of target setting through the Sector Agreement process is strongly encouraged.

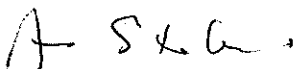
Adaptation

As stated in Council's Climate Change Adaptation Action Plan 2011-2013 and its feedback on the draft Climate Change Adaptation Framework for South Australia in March 2011, Council is committed to adaptation planning and supports the principle of an integrated, regional approach to preparing for climate change.

However, as stated in its feedback on the draft Adaptation Framework, Council is concerned that participating in comprehensive adaptation planning may require significant resources. Given the considerable resource demands already being placed on local government to respond to climate change, including through the Federal Government's proposed carbon pricing system, introducing statutory requirements in the CCGER Act around adaptation planning should not impose onerous obligations on councils.

For further information, please contact me on (08) 8203 7723 or a.stokes@adelaidecitycouncil.com.

Yours sincerely,



Adrian Stokes
Program Manager, Sustainable City

Business SA

ABN 14 725 309 328
Enterprise House
136 Greenhill Road
Unley South Australia 5061
Telephone 08 8300 0000
Facsimile 08 8300 0001
Email customerservice@business-sa.com
www.business-sa.com

October 31, 2011

CCGER Act Review
Sustainability and Climate Change Division
Department of the Premier and Cabinet
GPO Box 2343
Adelaide SA 5001



To Whom it may Concern

Business SA welcomes the opportunity to comment on the *Climate Change and Greenhouse Emissions Reduction Act 2007* (the Act) Legislative Review 2011 Discussion Paper.

Business SA is South Australia's leading business membership organisation, representing thousands of businesses through direct membership and affiliated industry associations. We represent businesses across all industry sectors, ranging in size from micro-business to multi-national companies.

Business SA supports a long standing Environment Committee featuring a diverse group of industry leaders. The Environment Committee has a clear mission to promote and contribute to environmentally sustainable development in South Australia through influencing legislation, regulations, policies and programs to achieve best practice in the business community.

Listed throughout the discussion paper are an array of programs, legislation and commitments linked to climate change and greenhouse gas emissions which highlight the complexity of this issue. South Australia has undoubtedly led the way in emission reductions and adaptation, with South Australian businesses committed through not only legislative responsibilities but also voluntary sector agreements.

Established targets as highlighted in the current Act are "to reduce by 31 December 2050, greenhouse gas emissions within this State by at least 60% to an amount that is equal or less than 40% of 1990 levels"¹. While this review is intended to provide the opportunity to adjust any set targets, it is unclear why South Australia will be adopting a target for greenhouse gas emissions equal to that of the national target.

It is stated on page 27 "*that the Commonwealth target is approximately twice as hard for South Australia to reach as the existing target*" and that "*The Commonwealth Government has indicated that approximately 50% of the emissions reductions required to achieve the 2050 target may be sourced*

¹ Legislative Review 2011 – Climate Change and Greenhouse Emission Reduction Act 2007.

through international emissions trading units." Stretched targets are nothing new but how far they should go must be questioned when there will be a potential negative impact on South Australian business if implemented.

Any targets that are set should be reflective of the South Australian economic profile from a skill, resources and technological perspective. As a National target each State and Territory has unique opportunities to reduce emissions therefore a thorough stock take of reduction opportunities must be considered. For example one State may be better at displacing coal fired power stations while South Australia may be best to stay on gas. In addition current and future industry activities must be considered when looking at stretched targets as South Australia is poised for expansion in emission intensive industry sectors.

The Commonwealth has identified the shortfall in achieving greenhouse gas emission reductions with the need to purchase trading units, as one nation with one target – the question can be asked that if a state target is established will this incur the need for the State to also purchase international trading units? While the establishment of carbon units is purposeful for specific legislation operation, it should be the responsibility of the Premiers' Climate Change Council to engage in robust discussions surrounding such actions. This current consultative process is about legislative review and does not consider the actions necessary to support the policy.

South Australia can continue to lead the nation however, careful consideration must be given to the impact on business and industry. Imposing additional stretched targets can place greater pressure and uncertainty on our key industry leaders there by reducing the advantages of doing business in South Australia. This issue has never been more important than now with the South Australia poised for rapid expansion.

It is vital that this legislative review does not:

- Burden South Australian business and industry with duplication
- Adopt national direction then impose additional State pressure on business and industry
- Limit the opportunities for South Australia to continue achieving sound and sustainable outcomes through step changes in efficiencies and preparation in all sectors for a low greenhouse gas emission economy.

Renewable energy targets are mentioned in the discussion paper as being amended to align with the recently released State Strategic Plan 2011. While it seems the new targets will be reached quite comfortably if investment in renewable energies continue there needs to be a robust discussion on all energy forms including nuclear power.

It should be noted that the State Strategic Plan targets were developed outside of the legislative review that underpins their success.

If you wish Business SA to expand on any of this submission please contact Rick Cairney, Director of Policy, rickc@business-sa.com.

Yours sincerely

A handwritten signature in black ink, reading "Peter Vaughan". The signature is written in a cursive style with a large, looped initial "P".

Peter Vaughan

Chief Executive Officer

Conservation Council SA



Conservation Council SA

Review of the Climate Change and Greenhouse Emissions Reduction Act (2007)

31 October 2011

**Conservation Council of SA Inc
CCSA
1/157 Franklin St
Adelaide
SA 5000**

p: (08) 8223 5155

f: (08) 8232 4782

e: general@conservationsa.org.au

www.conservationsa.org.au

The **Conservation Council of South Australia Inc (Conservation Council SA)** is the peak conservation body for South Australia, representing around 50 of the state's environment and conservation organisations.

Conservation Council SA is an independent non-profit, non party-political, community based organisation which provides resources, advice and representation for the SA environment movement, and which leads many of the key conservation campaigns in SA.

Conservation Council SA is known for its success in developing long term community development, education, and on-ground environmental restoration programs.

Conservation Council SA regularly liaises with local, state and federal governments, media, educational institutions, NGOs, unions, industry, business and other groups on matters relating to the environment and social justice.

As a community organisation, much of what Conservation Council SA achieves is through a large network of skilled volunteers from all walks of life – for its office, on-ground, governance and campaign activities.

Conservation Council SA is committed to a healthy environment for South Australia.

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1. INTRODUCTION

Thank you for the opportunity to comment on this section 21 review of the Climate Change and Greenhouse Emissions Reduction Act (2007).

We make a number of detailed comments on sections of the discussion paper in addition to the following key messages.

- The Climate Change and Greenhouse Emissions Reduction Act (2007) is extremely important and must be maintained and improved to lead South Australia towards a low carbon economy.
- The 2050 target to reduce emissions by 80% is supported (against a 1990 baseline), and there should also be a 2050 target for at least 80% renewable energy.
- We support the addition of a 2020 emissions reduction target, of 40-50% on 1990 levels. Interim greenhouse reduction targets are necessary through to 2050, and a greenhouse reduction pathway should be defined and followed.
- The 2020 interim renewable energy generation target should be at least 40% to 50%.
- The Commonwealth Government's Clean Energy Future Plan and carbon pricing mechanism provides no cause for abandoning or watering down long-term interim or sector targets. Complementarity thinking should not be carelessly applied to prevent or extinguish targets, actions and programs that can deliver tangible greenhouse gas emission reductions in South Australia.

2. OBJECTS OF THE ACT

The Objects of the Act, to reduce emissions by 2050; to commit to renewable energy; and to facilitate action by businesses and sectors, are sound and should be maintained. There is however, considerable inconsistency between the 2050 emissions reduction targets and the interim targets for renewable energy. For this Act to be regarded as credible an improvement would be to include 2050 targets for both reducing emissions and renewable energy, supported by progressive interim targets for reducing emissions and transitioning to renewable energy. Ideally these interim steps would be established in the context of progression along a greenhouse reduction pathway from 2012 to 2050.

Similarly, adaptation preparedness targets or a vision should be established for 2050, with progressive interim milestones.

3. POLICIES

Climate Change Policies in General

Whilst most of the policies described have considerable merit, it is difficult to see how the inclusion of support for such policies in legislation would make tangible difference. The greatest potential benefit of this amendment would be to have the legislation commit to establishing and maintaining effective policies for

- Assisting disadvantaged communities in relation to the effects and costs of climate change

- Meeting the needs of Aboriginal people in relation to the effects and costs of climate change, and in collaboration on greenhouse mitigation initiatives
- Reducing greenhouse gas emissions and adapting to climate change in government decisions
- Ensuring value for money (of public funds or where costs are passed through to consumers) in climate change programs.

Such policies need to be effective. For example, there is no point in considering greenhouse reductions in decision making unless there is a commitment and guidance to choose higher up-front costs for reduced emissions in the longer term.

EXTREME CONCERN ON COMPLEMENTARITY POLICY: Facilitate consideration of the complementarity of South Australian Government climate change measures to the Commonwealth Government's carbon pricing policy

Whilst the Federal Government's Clean Energy Future Plan (Commonwealth of Australia 2011) and carbon pricing mechanism is an important first step, it is in no way sufficient to deliver a low carbon economy. This initiative must stimulate action at all levels in the community, business, sectors, states and across the nation to reduce emissions. There is a material danger that a perverse view of complementarity will continue to stifle and extinguish tangible actions and commitments to tackle climate change.

The most extreme view was proposed in the *Strategic Review of Australian Government Climate Change Programs* (Wilkins 2008) which recommended the following under an emissions trading scheme:

- "The Commonwealth should be primarily responsible for mitigation policy and all jurisdictions should contribute to a nationally coordinated approach to adaptation",
- "phase out of programs assessed as not complementary to an ETS"
- "Environmental protection and planning laws across all jurisdictions should not require anything more than compliance with the ETS in respect of the emissions associated with projects in sectors covered by the scheme".

Surprisingly, the Wilkins Review virtually contradicted itself in suggesting greater support for cleaner coal (carbon capture and storage). Directing resources to pick coal as a winner rather than using the then Carbon Pollution Reduction Scheme market-based approach to determine the least-cost outcome is arguably not complementary.

The view fails to recognise however that whenever individuals, businesses or states take tangible actions to reduce their emissions, that makes it easier for the national target and scheme caps to be tightened. Where these actions can be directly measured, such as voluntary contributions of GreenPower, the national greenhouse target and scheme caps can be tightened correspondingly.

Taking tangible action has been supported by the former Minister for Climate Change (Wong 2009) who stated that:

- Individual action "will contribute directly to Australia meeting our emissions reductions targets" and
- "Strong household action also helps make it easier for governments to set even more ambitious targets in the future".

A set of complementarity principles agreed by COAG (Coalition of Australian Governments 2009) (including the South Australian Government) created the real risk that many state actions would be limited towards “market failure in a sector that is not covered by the Carbon Pollution Reduction Scheme” and “non abatement objectives”. South Australia's response to the COAG principles was contained in a report *Jurisdictions' Reviews of Existing Climate Change Mitigation Measures* (COAG Complementary measures sub group 2010) This response was more in line with the Wilkins Review and included undertakings to effectively delete the renewable energy ‘use’ target, not to pursue sector based greenhouse gas reduction targets and consider a further complementary measures review in 2012.

Inconsistent application of the Complementarity Principles

The Complementarity Principles have been used in Australia to justify the closure of offset mechanisms from acting within covered sectors and have extended into creating mixed messages and harming targets and voluntary action.

However, at the same time, state and federal governments continue to promote a variety of non-complementary energy efficiency programs, renewable energy targets and programs, including feed-in schemes and greenhouse intensity limits and direct action proposals (such as paying to close down individual power stations).

Clearly the strict Wilkins Review viewpoint and COAG Complementarity Principles cannot be implemented in a consistent way and would be counter-productive in setting state targets, sector agreement targets and creating the type of cultural change that is required across the community. The COAG Complementarity Principles should therefore not be included in any future decisions relating to state policy, state climate change legislation or the Clean Energy Future Plan. Instead, each state policy initiative should be assessed for its value for money in reducing emissions whilst ensuring that it does not displace action already required by law. (A 2009 example of this was the federal government's 5 times Solar Credits multiplier: enhanced with state feed-in tariffs this quickly displaced large-scale renewable energy that was already required by law, to the extent that investment in large-scale renewables stalled amidst a glut of renewable energy certificates.)

The Complementarity Principles have completely failed to support economy-wide inclusion into tackling climate change (even before an emissions trading scheme starts), despite knowing that the carbon price alone will not deliver a low carbon economy and failed to prevent a number of greenhouse policy mistakes.

Recommendation on Policies

- The Act should define a climate policy set (covering targeted areas such as supporting disadvantaged communities as outlined above) to be established and maintained. The titles should be free of jargon and branding as the policies need to be established for the long term, beyond election cycles.
- South Australia's Climate Change Legislation should continue to lead South Australia and Australia by setting targets to reduce emissions, agreeing targets with businesses and sectors and continuing actions to reduce emissions, wherever possible.
- Greenhouse mitigation policies must be properly assessed in terms of how they interact, but not under a narrow complementarity framework.

4. REVIEW OF TARGETS

Background

The current South Australian Target is an 80% reduction by 2050 compared with 1990 levels.

The science suggests that at least this level of greenhouse gas reduction will be necessary.

The Climate Commission report *A Critical Decade* (2011) delivers the key message that "This is the critical decade. Decisions we make from now to 2020 will determine the severity of climate change our children and grandchildren experience". South Australia is experiencing a growth boom and a mining boom and our greenhouse gas emissions are set to increase again sharply unless the state government leads us on a better pathway to a low carbon state economy.

The Federal Government has committed to a target of 80% reductions of Australia's emissions by 2050 compared with 2000 levels, and it is proposed that the state target change its baseline to match.

The Conservation Council supports an 80% reduction in emissions by 2050, but against the baseline year of 1990. Most countries (by far) that are pledging targets towards a future international agreement use the internationally accepted 1990 baseline. The motivations for countries that have chosen different baselines may be questionable, and so we argue South Australia should not change its baseline.

TARGETS – Renewable Energy

The Conservation Council SA Supports a renewable energy generation target and also recommends that a renewable energy consumption target to continue, based on GreenPower contributions.

The discussion paper says that the Renewable Energy consumption target was found in a review to be non-complementary. Indeed the KPMG/ Monash Consortium review considered that "state-based targets would be superseded by the national Mandatory Renewable Energy Target" which can be read as including both the generation target and the consumption target.

In reality, the consumption target was in the most part merely a reflection of renewable energy generation.

The Conservation Council of South Australia has for a long time called for consumption targets to be based around GreenPower contributions on top of the Renewable Power Percentage (RPP) charged to electricity customers. The State Government already considers GreenPower as consumption in its own 50% GreenPower target

Whilst the state government, SA Water and BHP Billiton have pledged to some large-scale renewable energy consumption, much more can be done. There would be many advantages to encouraging the greater uptake of supporting GreenPower through Climate Change Sector Agreements and by advocating for some further reforms of the

GreenPower program to define how transmission losses should be dealt with and to protect GreenPower customers against carbon costs that they have already paid to avoid.

Recommendation for Targets

2050 Targets

- The Act should be updated to commit to a target of 80% reductions on 1990 levels by 2050.
- A new 2020 emissions reduction target of 40-50% should be added.
- An 80% renewable energy generation target should be established for 2050.
- A 2050 climate change adaptation vision or target should be established.

Interim Targets

- The Act should commit to determining a greenhouse reduction pathway from 2012 to 2050.
- Interim renewable energy generation targets should be established for 2015 and 2020.
- The interim renewable energy generation target for 2020 should be increased to 40% to 50% as a stretch target (noting that 40% to 50% renewable energy generation is possible for South Australia by 2020, if significant transmission constraints can be overcome, and if big electricity consumers such as the mining and mineral resource processing sector commit to supporting more renewable energy in purchase power agreements and as GreenPower).
- A state program for completing and reviewing regional climate change adaptation plans should be established.

GreenPower Contribution Target

- We recommend a target to double the number of household GreenPower contributing customers by 2015.
- We also suggest a target to increase the voluntary GreenPower contribution by business customers to 1,000,000 MWh per year by 2020.

5. EMISSIONS INTENSITY OF ELECTRICITY GENERATION

The Conservation Council of South Australia supports a state-wide limit on the carbon intensity of total South Australian electricity generation to 0.5 tonnes of CO₂-e per megawatt hour by 2020.

There is however a need to ensure that this sits with a life cycle context and includes the scope 3 component of producing fuels, such as the scope 3 components of natural gas that is consumed when producing electricity. This is essential to maintain accordance with the GHG Protocol (World Resources Institute & World Business Council for Sustainable Development 2004) ¹ definition of emissions associated with electricity generation, and the National Australian Energy Market Operator measure of emissions intensity of electricity generation. If this is not the intention, the name of the measure needs to be re-titled as **'Emissions intensity of Combustion for Electricity Generation'** to

¹ . The Worley Parsons report referred to in this discussion paper appears to misrepresent a combustion tool as the GHG Protocol:

- See The GHG Protocol Corporate Standard (page 92) for emissions included in electricity generation
- See *Calculation Tool For Direct Emissions From Stationary Combustion Version 3.0* (GillenWater 2005) for combustion guidance

prevent any misleading statements from appearing in the Act, but this would be a poor outcome.

It is also important for full accounting of life cycle emissions to inform decision making, particularly given the current Australian gas rush and potential for South Australian needs to be increasingly met from coal seam gas, shale gas and even underground coal gasification.

To ensure that gas does not displace renewable energy sources, we recommend a new target specifying that any new gas development must be matched by at least an equal quantity of new renewable energy generation (MWh/year).

Recommendation

- The new carbon intensity target is supported with two caveats:
 - It should be based on life-cycle emissions accounting
 - New gas plant should be matched with at least the same quantity of renewable energy (MWh/year).

6. TARGETS AND THE SOUTH AUSTRALIAN ECONOMY

Whilst a greenhouse/economic activity indicator may have some use, there is a danger for over use of such targets which are highly susceptible to a range of external factors.

Such targets should not be elevated into prominence for climate change policy and must be used as a reference tool, far below the important principal and interim targets of reducing emissions and increasing renewable energy in absolute terms.

7. FOR FURTHER INFORMATION

Or to discuss any matters raised in this submission, please contact:

Tim Kelly

Chief Executive

tim.kelly@conservationsa.org.au

ph 8223 5155 or 0417 879 439.

8. REFERENCES

Coalition of Australian Governments 2010, *Jurisdictions' reviews of existing climate change mitigation measures*, Complementary measures sub group.

Coalition of Australian Governments 2009, '*COAG principles for jurisdictions to review and streamline their existing climate change mitigation measures*'.

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Doctors for the Environment Australia

**Comments on the
Discussion Paper on the 2011 Legislative Review of
the Climate Change and Greenhouse Emissions
Reduction Act 2007**

Submission from
Doctors for the Environment Australia Inc.
David Shearman, Hon Secretary
5 Fitzgerald Road PASADENA SA 5042
Phone: 0422 974 857
Email: admin@dea.org.au
<http://www.dea.org.au>



The following are members of our Scientific Committee and support the work of
Doctors for the Environment Australia

Prof. Stephen Boyden AM; Prof. Peter Doherty AC; Prof. Bob Douglas AO; Prof. Michael Kidd AM;
Prof. Stephen Leeder AO; Prof. Ian Lowe AO; Prof. Robyn McDermott; Prof. Tony McMichael AO;
Prof. Peter Newman; Prof. Emeritus Sir Gustav Nossal AC; Prof. Hugh Possingham; Prof. Lawrie Powell AC;
Prof. Fiona Stanley AC; Dr Rosemary Stanton OAM; Dr Norman Swan; Professor David Yencken AO

Doctors for the Environment Australia (DEA) is a voluntary organisation of medical doctors in all Australian states and territories. We work to address the diseases – local, national and global - caused by damage to the earth's environment. In effect we are an independent public health organisation.

Doctors for the Environment Australia has the health impacts of climate change as its priority issue for it has been identified in 2009 as “the greatest threat to health” by the University College London and *The Lancet* Report. It has been described by the World Health Organisation's director Dr Margaret Chan as ‘the defining issue for public health during this century.’

David Shearman, who has prepared this submission on behalf of Doctors for the Environment Australia, is a member of the International Committee of the Climate and Health Council and the Board of the International Society of Doctors for the Environment. He contributed to two of the most recent IPCC reports and is co-author on several academic books on climate and global environmental change.

Summary

In its Energy Policy last updated 2008-2009, in accordance with the current scientific evidence at that time, DEA supported a target of emission reduction on 1990 levels of between 25% and 40% by 2020.

http://dea.org.au/images/general/Energy_Policy_Final_2009.pdf

We now contend using the evidence listed below that the main thrust of policy should be 40% reduction on 1990 levels by 2050. Targets for 2020 are much more important than those for 2050.

With the accelerating rise in world greenhouse emissions and the recognition that they must peak in this decade if we are to avoid serious temperature rise, we contend that the 2020 reduction target should be part of the Act.

This can be addressed by the next two parliaments and by the current community and generation whereas 2050 targets are easy to make and do not carry responsibility for those who make them.

The basis for this recommendation will be detailed in the context of climate science, global environmental change, economics, energy needs, population policy, community and political psychology and practical suggestions for delivering the target through co-benefits and increases in state resilience.

Why a target for emissions?

Targets are necessary (1) as an indication of the degree of reduction to keep climate change within manageable levels, put more simply in blunt terms, to ensure that the temperature rise is not so great as to irrevocably damage much of the earth and reduce the population carrying capacity to a fraction of today's 7 billion (2) to allow government and community to model the necessary actions retrospectively.

Targets that can be delivered have to be generational to the working life of the present community. There is accumulating evidence that individuals have little regard for future generations other than their children.

We agree that the 2050 target should be increased to at least 80% but by 1990 levels. However we point out that 2050 targets, relying on future generations are unrealistic and can be influenced by this generation only in so far as by accomplishing a short term target that allows the future generation the option of continuing to deliver. This is an important concept for the science tells us that unless we deliver a deep reduction in emissions to bring about a peak in emissions by 2020, we are heading for temperature rises much above 2 degrees.

Australia has promised to cut emissions by between 5 and 25 per cent by 2020 over 1990 levels, depending on the strength of international action; with the passage of the Clean Energy Future Package, a 2020 40% target is possible for SA.

We recommend that targets should be instituted for more of the essential drivers of emission reduction.

The relevant science to a 2020 target

There are now many studies from institutions of scientific standing which confirm the IPCC assertion that the world temperature has risen by over 0.8 degrees since 1950. In fact recent comprehensive evidence using 1.6 billion temperature readings from Richard Muller Professor of Physics at University of California, Berkeley confirms a rise of 1 degree Celsius. This study is also important in that it was in part funded by fossil fuel based climate change deniers in the expectation that it would contradict earlier studies.

The rate of temperature rise and accumulation of greenhouse gases in the atmosphere are accelerating. The steady flow of scientific papers all point to faster climatic, biological, sea level and chemistry changes than was anticipated by the most recent IPCC report. In the opinion of this author who was a participant in the report, the basic tenets of the report remain intact; it was a prodigious review. However it underestimated the rate of change. The report was toned down at the behest of government participants on the basis that the findings were too difficult to address. Further, there are several known and potential climatic and ecological positive feedbacks that can greatly amplify climate change, some of these, such as albedo effect, release of methane from thawing tundra, the burning of drying tundra and the increase in forest fires are occurring earlier, or at a greater rate, than anticipated. Further, climate tipping points are a risk as they cannot yet be accurately predicted.

Nowhere has acceleration become more evident than in the study of Stefan Rahmstorf, Professor of Physics at Potsdam University, who shows that for the second time in four years the ice cover at the Arctic in September had been reduced to 4.4 million square kilometres, 40 per cent less than it had been three or four decades earlier. In 2007 the reduction had been explained by odd wind patterns. There had been no odd winds this summer. The ice was also rapidly becoming thinner. There was now a prospect of an ice-free Arctic in summer, decades earlier than had once been believed remotely possible. The reflective mirror, the albedo effect, will be completely lost. A similar rate of loss from the Greenland icesheets leads to the increased possibility of sea level rise of 6-10 meters at equilibrium instead of centimetres.

The latest (2010) figures on greenhouse emissions are alarming. The global output of carbon dioxide jumped by the greatest amount on record, according to the U.S. Department of Energy. The world released about 564 million more tons (512 million metric tons) of carbon into the air in 2010 than it did in 2009,

an increase of 6 per cent, with fossil fuels being the main contributor and Australia as the main exporter of coal leading this increase. These figures put global emissions higher than the worst case projections from the IPCC which forecast global temperatures rising between 3.4 to 5.4 degrees Celsius.

The Royal Society in the report *Four degrees and beyond: the potential for a global temperature increase of four degrees and its implications* says "Even with strong political will, the chances of shifting the global energy system fast enough to avoid 2°C are slim. Trajectories that result in eventual temperature rises of 3°C or 4°C are much more likely, and the implications of these larger temperature changes require serious consideration".

Avoidance of 3 or 4 degrees requires an early peak in emission followed by a steep fall. In Nature 2009 Meinshausen *et al* found that only about a third of economically recoverable oil, gas and coal reserves can be burned if global warming of 2 °C is to be avoided by 2100, an amount of fossil fuel that would be burned by 2029 if consumption remains at today's levels. But in the 2 years since the report there has been an acceleration, making it likely that 2020 or soon after is a crucial target for an emissions peak.

The economics

The world has moved to legally enforceable free trade and an integrated and largely autonomous financial system with the result that the main players are the huge corporations and financial houses some of which have assets much greater than individual nations. Governments are subservient to these forces which have private profit as their *raison d'être*, indeed many governments are supplicants for favours and jobs and political parties are recipients of largesse. By contrast governments have failed to recognise that we all share the same atmosphere and would be better suited by interdependent sustainability agreements and laws.

It is recognised that the only way the world can escape dangerous climate change is for the developed countries to move rapidly to a zero carbon economy, for this is necessary for poor countries to raise their standard of living, in effect a 'contraction and convergence' system based on per capita emissions. Either this will occur on a voluntary basis (international agreements) or it will happen due to forces beyond human control and with a greater and varying degree of chaos. Such a scenario is suppressed in the thoughts of most politicians but there is an increasing number of economists, analysts and scientists who ascribe to this view.

A world economy based on growth to create jobs is no longer possible under "contraction and convergence" required to limit greenhouse emissions and even if no action were taken, growth will founder on the rocks of decreasing resources, contracting productive land, water problems and high energy costs, processes that are already underway. Indeed many analysts believe that continued growth may not be possible subsequent to the US and European financial crises.

Energy needs

There is one further important factor that needs to be taken into account in emission reduction, peak oil. This topic attracts more denial than climate change. There are now several comprehensive reports from those with a compelling interest, the military establishments, including those in the US and Germany that peak oil will be with us this decade. The rise in the cost of oil based fuels_ will have profound effects on transport and agricultural systems (fertiliser) and whilst its initial impact will be to use less oil, the energy alternatives are generally far more greenhouse emissions intensive.

The future for SA based on present trends

The future for SA is bleak unless global emissions are reduced. The recent increase in the trend of world emissions indicates that the CSIRO modelling may have to be revised. With movement of climatic zones away from the equator the climate is likely to be one of Saudi Arabia today; with loss of the food producing areas of the mid-north. Water will be scarcer and the Murray River cannot be counted upon.

On these grounds alone SA must increase its effort to offer leadership both within and beyond SA. DEA does not ascribe to the view of many politicians that Australia is doing more than any other nation, rather it is in the middle of the pack, an invidious position for the greatest per capita emitter. Indeed there is evidence that national changes in state governments are leading to the weakening of emission control intent. It is possible that within the next year SA may be the only state willing to offer leadership and this makes it essential that 2020 targets are displayed and accomplished.

Doctors for the Environment Australia, as an organisation concerned first and foremost with human health, recognises that Australian emissions can be calculated to cause 500 deaths per annum in the developing countries due to the health impacts of climate change. It is now possible to estimate the international mortality and morbidity attributable to a given coal mine or coal or gas fired power station during its lifetime. This ethical and moral issue is not yet accepted by Australian governments. The figure of 500 deaths per annum is conservative but will be revised upwards quickly now that scientific evidence is emerging (forthcoming UN report) that extreme weather events are climate change related and are increasing.

However SA must recognise that with the failure of the world to impact on the rising trend of emissions there will be considerable damage to SA over this century.

This indicates that more urgent action should be taken now by reorganising budgets and reforming government thinking. The SA government has moved faster than any other state in reducing emission and this must be acknowledged and commended, nevertheless all actions fall far short of the necessary reform considering the gravity of the situation. In SA many positive

decisions on emission reduction have been seen to exist in a 'parallel world' to emission increasing decisions which promote commercially driven consumerism. For example the only greenhouse mention on the Adelaide Oval development was that it would favour public transport and so reduce emissions. In 21st century thinking every project should be evaluated not only for its greenhouse cost and life cycle but an assessment of the gain if \$500 million had been spent on increasing the resilience of the state, for example on some of the policies detailed below.

Decisions on forestry, population and mining development especially emissions from the Olympic Dam expansion have indicated that the Government still does not appreciate the gravity of the situation or if they do, they put political expedience first. Population growth is a major driver of emissions, http://dea.org.au/images/general/Doctors_for_the_Environment_Australia_population_policy_with_endnotes.pdf

We note that government policy is to

"Ensure the need to reduce greenhouse gas emissions and adapt to the effects of climate change is considered in all relevant Government decisions."

In the Act we suggest the word "considered" be changed to "acted upon."

There is a further factor to be taken into account in the determination of policy and the setting of targets; the increasingly dysfunctional political system which in English speaking countries has moved to use opposition to reform as a way to power. Reform is threatened by repeal of legislation and targets are changed.

Therefore policy needs projects and targets that can be delivered within 4-8 years, cannot be reversed and which have co-benefits, so are more economically acceptable. In any case it would be important to seek bipartisan support on these projects and if co-benefits are built in, their rejection by those still in climate denial becomes less likely as they can be supported on economic and health grounds in their own right.

"Co-benefits" is a health concept, for example enhanced public transport leads to reduced emissions but also significant health gains from reduction in private transport, more exercise, less obesity and more congenial and healthy suburban and city living with less cardio-respiratory disease from associated air pollution.

Let us look at some examples relevant to SA which can help fulfil the 2020 target and which embrace the above requirements.

Replacement of the Playford B and Northern Power Stations

This is the most outstanding example of a co-benefit.

Coal supplies are running out and are low grade and polluting.

These power stations will be uneconomic under the carbon tax.

Alinta is in favour of replacement with renewables if finance can be found.

Co benefits

- DEA has not done the modelling but suspects that action now to replace both power stations with solar thermal will enable a high 2020 target to be met.
- The health case for conversion is compelling. The conservative estimate of health costs within Australia from coal fired power stations close to communities is \$3 billion p.a. Port Augusta will benefit from reduced cardio-respiratory disease, stroke, hypertension and several other diseases.
- Sustainable healthy jobs for workers.
- Providing resilience to a community (Port Augusta) that might otherwise be a non-viable town as global environmental change takes effect.

Resilience and water policy

In a submission in 2009 to the Parliament of Australia, DEA explained the difficulties in delivering effective decisions to ensure the River Murray would remain viable

http://dea.org.au/images/uploads/submissions/sub_effect_house.pdf

Three years later the matter is even more serious; all signs point to a report which will not sustain river flow for SA. This point is made because under worsening climate predictions, there is a distinct possibility that SA will have to do without this source of water.

Infrastructure developments on storm water and other conservation methods such as recycling are emission savers when the alternative might be additional desalination.

In this regard we note

“State and Local Governments, together with SA Water have undertaken a range of projects to diversify South Australia’s water supply, including desalination, waste water reuse and storm water harvesting.”

DEA remains unconvinced that the existing programs are commensurate with the need for urgent and sustained action. We need targets in this sphere for self sufficiency and appropriate budgets.

Co benefits and other reductions in emissions

DEA saw the community consultation document for the first time on the closing date and we are grateful for the opportunity of this late submission. DEA operates mainly at a national level and we are not familiar with all the necessary detail to make comment in other areas of health benefit. However from reading the consultation document it seems likely that there are significant co-health benefits to be gained in the transport sector and in the agriculture /biodiversity area.

In the discussion document, health is covered in a perfunctory manner; only heat stroke is mentioned whereas the health aspects of climate change will

impact most human endeavours. For example a recent study from the US Natural Resources Defence Council has detailed the health costs of extreme weather events in the US this year as \$14 billion; most of these events are attributable to climate change. Such events have a greenhouse emission cost in addition to a health cost and must be factored in the thinking and planning of any government

9.11.2011

Environmental Defenders Office (SA)



A Community Legal Centre specialising
in public interest environmental law

2 November 2011

CCGER Act Review
Sustainability and Climate Change Division
Department of the Premier and Cabinet
GPO Box 2343
Adelaide SA 5001

By email: climatechange@sa.gov.au

REVIEW: CLIMATE CHANGE AND GREENHOUSE EMISSIONS REDUCTION ACT 2007

The Environmental Defenders Office (SA) Inc (EDO) is a community legal centre with over 15 years' experience specialising in public interest environmental and planning law. Engaging in law reform processes, including reviewing and proposing changes to environmental bills and legislation, forms an important part of our work and so we welcome the opportunity to make a submission with respect to this discussion paper.

It is an objective of the EDO (and has been since it was formed) to "seek appropriate law reform to improve environmental protection"¹ and so we support legislation designed to achieve this aim. Given that the EDO is a legal office, we will comment on the legislative aspects of the review and not the policy aspects.

Background

When the *Climate Change and Greenhouse Emissions Reduction Act 2007* (the Act) commenced on 3 July 2007 it was only the third of its kind in the world after California and the Canadian province of Alberta². With the current legislative review of the Act, South Australia has an opportunity to remain at the forefront of the world in addressing the impacts of climate change by enabling a clean energy future. This can be achieved by addressing the following:

¹ EDO Constitution

² Hansard House of Assembly 6/12/06 page 1522

- appropriate and binding targets;
- targets based on 1990 levels and the inclusion of a definition in this regard;
- the voluntary nature of the Act.

Targets – section 5

Reduction target

Section 5 provides that the principle target under this Act is to reduce greenhouse gas emissions within this State by at least 60% to an amount equal to or less than 40% of 1990 levels.

This target has been subject to criticism as:

- it is largely aspirational given the long time frame within the target; and
- the reference point refers to 1990 levels. However, this term is not defined within the Act, but rather left to the discretion of the Minister³. This lacks transparency. It means that industry which may be relying on this reference point cannot do so with sufficient clarity. Further, there is concern that the reference point may be subject to interpretation and discretion and so may be altered depending on the circumstances.

The Legislative Review proposes that the target be changed to the following:

“Reduce by 2050 greenhouse gas emission within the State by at least 80% to an amount that is equal to or less than 20% of 2000 levels.”

We endorse the increased reduction to 80% but do not support the alteration to the baseline reference point of 1990 levels as this is not supported at the international level⁴.

As acknowledged in the review, there is public concern that action combatting climate change is required in this decade and an interim target would demonstrate South Australia’s commitment and leadership regarding this issue⁵. For these reasons and in order to ensure a robust and transparent process, we recommend that:

- interim targets be introduced;

³ Section 5(3) of the Act

⁴ Framework Convention on Climate Change and the Kyoto Protocol

⁵ Climate Change and Greenhouse Gas Emission Reduction Act 2007 Legislative Review 2011 Discussion Paper at p 28-29

- the inclusion of a definition of “1990 levels” within the interpretation section of the Act⁶,

Renewable energy targets

Renewable energy generation target

With respect to the renewable energy generation target, we endorse the increase in the target. We note that achievement of the target appears to be supported by the uptake of wind power. In this regard, we acknowledge that wind generation capacity in South Australia has increased and this is commendable. However, there is concern that wind farms are being “rushed through” the planning system. Naturally, we are in favour of renewable energy being promoted and used provided that it is introduced in accordance with proper planning procedures including third party appeal rights.

Renewable energy consumption target

The EDO supports the renewable energy consumption target and endorses the comments of the Conservation Council in that regard⁷.

Finally, all targets within the Act have been subject to the following criticisms:

- the targets need to be couple with incentives to assist in meeting them;
- the targets are voluntary and require the inclusion of enforcement mechanisms to ensure that the targets are met.

The only external consideration of the targets is by reviews pursuant to the Act. We recommend that the Act be amended to include the provision of incentives and enforcement mechanisms (such as penalties for non-compliance) in order to ensure that targets are met.

Voluntary agreements – section 16

Section 16 allows for voluntary agreements and the Legislative Review indicates that 17 agreements are in place. Whilst these agreements are commendable, they are voluntary and therefore not enforceable. If there is no mandatory requirement to in fact reduce greenhouse gas emissions and if this requirement is not linked to some

⁶ Section 4

⁷ Submission Conservation Council of South Australia regarding the Review of the *Climate Change and Greenhouse Gas Emissions Act 2007* dated 31 October 2011

enforcement mechanism, the reach and scope of the Act is of limited use. Accordingly, we recommend that the agreements be made enforceable.

If you have any queries, please contact Ruth Beach of this office.

Environmental Defenders Office (SA) Inc

Paul Harris

From: Harris Family

Sent: Sunday, 30 October 2011 4:39 PM

To: DPC:Climate Change

G'day,

I have a few point to make about the Review of SA Climate Change Legislation.

1. If it is possible to get to 100% renewable in 10 years (Beyond Zero Emissions) why is the proposal only a 33% renewable generation target by 2020 ?
2. Gas is NOT renewable and is only "cleaner" than coal – it is NOT a clean energy and so (if absolutely necessary) should only be used to assist a transition to 100% renewable.
3. I was shocked to learn at a recent information session that the gas for SAs power is likely to be coal seam gas from Queensland and NSW, as that appears to be far from being environmentally friendly – I recently heard (at a different forum) of someone from the coal seam gas area who now has toluene in his groundwater supply.
4. South Australia can maintain its position at the front of Australian Renewable Energy by building a Solar Thermal Power Station at Pt Augusta to employ those displaced by the closure of Playford B coal fired station and replace that units output.
5. It makes sense that, as one of the places most likely to be adversely affected by Climate Change, that South Australia make every effort to increase the use of renewable energy from wind and solar to replace polluting conventional power.

Yours Sincerely,
Paul Harris

Property Council of Australia (SA Division)



CCGER Act Review
Sustainability and Climate Change Division
Department of the Premier and Cabinet
GPO Box 2343
Adelaide SA 5001
climatechange@sa.gov.au

31 October 2011

Dear Sir/Madam

The Property Council of Australia (SA Division) is pleased to provide the following submission to the Sustainability and Climate Change Division on the *Climate Change and Greenhouse Gas Emissions Reduction Act 2007* Legislative Review 2011 and accompanying Discussion Paper.

The Property Council of Australia is the peak body representing property owners and developers spanning all asset classes including commercial, industrial, retail and residential property. In total, the Property Council represents the interests of more than \$35 billion invested in property in South Australia, including the more than \$5 billion invested on behalf of working South Australians through their superannuation funds.

The Property Council of Australia (SA Division) is an Alliance Partner to *South Australia's Strategic Plan* (SASP). In support of the Strategic Plan's climate change targets, the Property Council has signed a Sector Agreement under the legislation in recognition of property sector's capacity to reduce the impact of the built environment on climate change.

At a national level the Property Council of Australia is a member of the Australian Sustainable Built Environment Council (ASBEC) and has been integral in delivering ASBEC's two touchstone reports on the built environment's contribution to greenhouse gas emissions and the policy mechanisms required to reduce its impact.

In developing this submission, the Property Council has canvassed the opinions of our members as well as discussing the Discussion Paper in detail with our Sustainable Development Committee.

The Property Council supports much of the information contained in the Discussion Paper but has provided specific comment and recommendations on areas that we believe require further action.

Discussion Paper: Background

The Property Council congratulates the State Government for its ongoing leadership on climate change while recognising that this issue is not one that can be resolved within state borders and must be addressed in a national and international context.

A major policy shift has occurred nationally, with the Rudd-Labor Government ratifying the Kyoto Protocol and the Gillard-Labor Government pushing ahead with the introduction of its Carbon Pricing Scheme. These initiatives recognise that the majority of the policy levers of climate change policy reside at federal and international levels.

To date much of the discussion about reducing greenhouse gas emissions has focused primarily on stationary energy and energy intensive industries and has not materially focused on the gains that can be achieved through increased environmental performance in the built environment.

The Second Plank report by ASBEC demonstrated that the built environment account for around 23 per cent of Australian's greenhouse gas emissions (GHG). Further, a focus on building energy efficiency can:

- halve electricity use in commercial building stock by 2030 and 70% by 2050;
- reduce GHG emissions by 30% within two decades;
- cut the cost of carbon abatement by 14% or \$30 per tonne by 2050;
- add \$38 billion each year to GDP compared to conventional GHG abatement programs by 2050;
- provide breathing space for the development of clean energy alternatives; and
- help the nation reduce its carbon footprint faster and with less fuss.

The Property Council has been a strong proponent of policy mechanisms that we believe will achieve these substantial gains in the area of reducing greenhouse gas emissions. Some recent initiatives are gaining traction and are showing potential to complement Federal economic levers.

Review of the Targets

The Property Council supports the Government's proposal to amend the headline target contained in the Act for the reduction of greenhouse gas emissions in South Australia. The amendment aligns South Australian targets to Commonwealth targets, providing certainty for the business sector as well as the community.

The Property Council also welcomes the proposed targets for renewable energy generation and the proposed removal of the target for renewable energy consumption. These targets mirror those contained in SASP and reflect the community's desire for greater incentives to encourage alternative sources of energy generation.

The proposed target for emissions intensity of electricity generation is also welcomed, and will again help to ensure that this Act functions as a means to achieving the targets outlined in the SASP.

However, any amendment to the targets and the policy mechanisms used to facilitate their attainment, including those outlined in the Discussion Paper, must be considered in light of the Federal Government's proposed Carbon Pricing Scheme.

As outlined above, the built environment contributes approximately 23 per cent of greenhouse gas emissions and, at the same time, the property sector is one of the most important contributors to the state's economy. It should also be acknowledged that the industry has been proactive in voluntarily driving initiatives that reduce its impact on climate change. The combination of Federal and State policies therefore must not result in an unfair disadvantage to what is one of the most important sectors in the South Australian economy.

Government uptake of upgraded buildings

As part of its commitment to reducing the environmental impact of its operations, the State Government has a policy of requiring a minimum 5-Star NABERS rating on new leases entered into for leases over a certain threshold. The Government should be commended on this commitment, however the Property Council believes this policy should be updated to appropriately include rather than exclude existing buildings.

The embodied energy contained within many of the buildings in Adelaide is in some cases too great to justify their demolition in favour of new, more energy efficient buildings. However many are in grave need of upgrades to bring them to a minimum acceptable environmental rating.

However, there are serious questions about the ability and costs related to bringing older buildings up to the 5-Star standard.

We recommend that the Building Management Group of the Department of Transport, Planning and Infrastructure investigate what the minimum acceptable star rating should be for new government leases in existing buildings and how it would be applied. The Property Council would be pleased to assist in this project.

Recommendation

1. Charge the Building Management group with determining the minimum acceptable environmental rating for existing buildings the State government currently leases or intends to lease space in in the future

New incentive measures

To assist in the reduction of greenhouse gas emissions caused by the retention of existing buildings, the Government should introduce incentive-based measures which facilitate the upgrade of the existing building stock in the Adelaide CBD.

It should be recognised that the property sector is already a significant contributor of voluntary effort to this cause, and that many mandatory steps, such as mandatory disclosure of energy efficiency, have already been implemented.

The time has now come for a new approach by the government, which further facilitates, encourages and incentivises the property sector to further improve its environmental performance.

The Property Assessed Clean Energy (PACE) scheme currently in operation in Sydney and Melbourne provides building owners with greater access to finance to enable 'green retrofits' of their buildings through a partnership between Local Government, financial institutions and the property owner. This is particularly important in the current tough finance market

The Property Council strongly advocates the introduction of a similar scheme here in Adelaide to help bring lower-grade office space up to minimum environmental standards and help reduce the environmental impacts of the built environment.

Recommendation

2. Introduce legislation to enable the establishment of a Property Assessed Clean Energy scheme in South Australia, to encourage the environmental upgrade of existing building stock

Removing financial penalties for delivering sustainable outcomes

The current State taxation regime, in combination with the current mechanism used by Adelaide City Council to apply rates, acts as a severe disincentive to building owners to upgrade their stock.

While the State Government seeks to reduce the greenhouse gas emissions of the State – a large proportion of which are generated in/by the CBD – it has so far failed to engage in taxation reforms which remove financial disincentives and encourage building owners to upgrade.

Under the current system, should a building owner upgrade their building or build a new 5-Star NABERS rated building, they immediately face an increased land tax bill and the tenants face an increased council rate bill as a result of the increased value of the property.

For example, an older building in Adelaide with a Council Rate bill of \$100,000 was demolished to make way for a new 5-Star NABERS building which immediately attracted a rate increase to around \$1m per year. This cost is borne by the tenants and the property owner also had to pay a significantly increased land tax bill (as land tax cannot be passed through to tenants) – all the while helping deliver on the Government's targets.

Recommendation

3. Engage in a program of taxation reform, particularly in the areas of land tax and stamp duty, to remove the financial disincentives the current regime creates for the property sector in seeking to upgrade their buildings

Conclusion

The State Government must be congratulated for its long-term commitment to promoting South Australia as the most sustainable state in the federation through its nation leading climate change legislation.

As a consequence many great steps have been taken to reduce South Australia's impact upon climate change.

The Property Council's resolve on this issue is demonstrated in our Sector Agreement and attached Building Innovation Fund as well as our Alliance Partnership on *South Australia's Strategic Plan* and our support of the 30-Year Plan for Adelaide.

As discussed above, the Property Council stands with the Government on the need to address the cause and effects of climate change and is keen to strengthen the relationship to deliver greater outcomes.

We would be pleased to meet with the Sustainability and Climate Change Division to elaborate on any areas covered in our submission. If you would like to discuss this submission, please do not hesitate to contact my office on 8236 0900 to arrange a meeting.

Yours sincerely,

A handwritten signature in black ink, reading "Nathan Paine". The signature is written in a cursive, flowing style.

Nathan Paine
Executive Director
Property Council of Australia (SA Division)

Attachments:

- 1. Property Council of Australia (2011): Property Assessed Clean Energy paper**
- 2. Property Council of Australia (2007): Green Building Incentive public policy paper**



What is PACE?

PACE (Property Assessed Clean Energy) is a financial scheme developed in America that reduces the financial barriers faced by property owners who wish to make their property more environmentally friendly. In the USA, in areas with PACE legislation in place municipality governments offer a specific bond to investors, the revenue raised is then loaned to consumers and businesses to put towards an energy retrofit. These loans are repaid over the assigned term (typically 15 or 20 years), by an increase in the property tax payable on that property.

PACE bonds can be issued by municipal financing districts or finance companies and the proceeds are used to retrofit both commercial and residential properties.

PACE is unique in the fact the loan is attached to the property rather than an individual. This provides benefits for property owners who may not hold the building for the life of the loan. PACE also offers an upfront benefit to building owners as the real benefits from the green initiatives can be realised immediately through reduced energy or water costs whilst repaying the debt.

What occurs in Australian jurisdictions?

Victoria

As part of Melbourne's *1200 Building Program*, Victoria passed Australia's first legislation to enable a municipal council to recoup targeted retrofit funding through its rates collection. Under an amendment to the *City of Melbourne Act* the council will help building owners obtain finance from financial institutions to fund retrofits. The loans will apply to retrofits of buildings that participated in the City of Melbourne's *1200 Buildings Program*, which aims to achieve energy and water savings and cut carbon emissions.

The City of Melbourne developed the financial mechanism with banks to build incentives for environmental retrofits and overcome the difficulty that many buildings owners have in accessing capital to finance their refurbishment projects.

A report from Deloitte, *City of Melbourne – 1200 Buildings – analysis of potential economic benefits* completed in June 2009 stated that the expected economic benefit could be up to \$2.3 billion "in real terms" on base buildings alone and not including other work that might be included during the course of retrofit work or future "embedded electricity generation at a building level". The report estimates around 800 jobs will be created each year on average over the 11 year life of the project.

A successful *1200 Buildings Program* could provide businesses in the City of Melbourne with a reduction in energy costs of around one quarter of current levels (holding energy intensity of building usage constant). This reduced energy expenditure would allow funds to be used for more productive activities elsewhere in the economy.

Melbourne City Council (MCC) estimates that if fully implemented and assuming an improved energy performance of 38%, the Program has the potential to deliver greenhouse gas mitigation of 383,000 tonnes of CO₂ equivalent per year.

The way it works

The council may enter into Environmental Upgrade Agreements (EUAs) with commercial property owners seeking upfront financing for projects that improve energy, water and environmental efficiency, and with the financial institutions willing to fund those retrofits.

Upon approval of the EUA, the lending body advances funds to the building owner to undertake the project. The owner or occupier pays an ongoing Environmental Upgrade Charge (EUC), levied by the council, which essentially matches the principal and interest. The payments are then passed on to the lender. A proportion of the EU charge accounts for MCC's administrative costs.

Importantly for MCC, it is not liable to repay the lending body until the environmental upgrade charge has been paid or is recovered from the ratepayers. However lenders also have security because an unpaid charge transfers to the property, is subject to penalty interest rates, and can be recovered.

Preconditions for environmental upgrade agreements

- MCC must receive a notice from the owner that any existing mortgagee has been notified of the owner's intention to enter into an environmental upgrade agreement and the details of the environmental upgrade charges expected to be declared;
- MCC must receive a notice from the lending body confirming that the total value of the environmental upgrade charges as set out in the proposed agreement, when added to any taxes, rates, charges or mortgages owing on the land, will not exceed the capital improved value of the land to which the agreement will apply;
- each occupier who would be liable to pay all or any part of the environmental upgrade charge levied as a consequence of the agreement must be given a statement with details of the proposed charge, including the amount to be paid and the repayment schedule, and be provided with the opportunity to consent or object to the imposition of the charge; and
- each occupier who receives the statement must consent to the imposition of the charge in the manner specified.

New South Wales

In contrast to the Victorian Act, the NSW legislation is not limited to the City Council however is likely to be limited to the local government areas covering the commercial centres of Sydney, Parramatta, Ryde, Chatswood, Newcastle and Wollongong.

The fundamentals of the scheme in NSW are similar to the scheme in operation in Victoria however there are several salient points of difference, including:

- environmental upgrade agreements can apply to strata titled buildings. This enables agreements to be entered into for multi-residence strata buildings (minimum 20 lots), not just non-residential buildings. In the case of strata buildings, the environmental upgrade charge is levied on the owners corporation, not the individual lot owners or tenants, and can be paid from either the administrative or sinking fund;
- while a council is not liable for any unpaid charge to the lender, a council is obliged to use its best endeavours to recover the environmental upgrade charge;
- more than one environmental upgrade agreement may be entered into in relation to the same works. This is likely to provide some flexibility in how works are carried out, financed and repaid; and
- the environmental upgrade agreement can address early repayment of the amount payable under it.

Importantly, the NSW Act includes additional provisions to enable lessors to recover contributions to the upgrade costs from lessees. These additional provisions include:

- a lease may require a lessee to pay to the lessor a contribution towards the environmental upgrade charge, provided that it does not exceed the reasonable estimate of the costs savings to be made by the lessee as a consequence of the environmental upgrade works;
- the environmental upgrade agreement can specify the methodology for the calculation of the costs savings attributable to both the leased premises as well a proportion of savings to all occupants (such as the common areas and base building components) from the upgrade works. The lessor and lessee may agree their own methodology;
- the lessor does not require the lessee's consent to enter into the environmental upgrade agreement before the lessee can be made liable to pay a contribution to the costs of the upgrade works. It is sufficient that the lessor provide a copy of the agreement to the lessee. The lessee's liability however is capped to the reasonable estimate of the costs savings made by the lessee;
- contributions are not treated as a capital cost which would otherwise not be recoverable under section 23 of the Retail Leases Act 1994 (NSW);
- the lessor's obligation under section 40 of the Residential Tenancies Act 2010 (NSW) or section 19 of the Residential Tenancies Act 1987 (NSW) to pay rates taxes and charges does not apply environmental upgrade charges;
- a contribution by a lessee to the cost of the upgrade is an outgoing for the purposes of the Retail Leases Act 1994 (NSW); and

- a term of a lease entered into before the commencement of the NSW Act which requires the lessee to pay to the lessor any charge payable by the lessor is taken to require the lessee to also pay a contribution towards any environmental upgrade charge that relates to the leased premises.

Preferred Model

The New South Wales model is superior in many ways and should be seen as the ideal model for replication in South Australia.

The New South Wales *Local Government Amendment (Environmental Upgrade Agreement) Bill 2010* could be used as a template for the general basics of a PACE scheme in South Australia (subject to legal advice).

However, due to the centralised nature of the South Australian commercial office market (about 70-80 per cent is contained within the Core, Frame and Fringe) the Property Council believes the initial scope of a South Australian PACE scheme should be limited to the Adelaide City Council area. The option to expand the scheme should not be ruled out completely, however at this stage South Australia does not have significant commercial centres outside of the Adelaide CBD that would benefit from such a scheme.

Of particular importance for inclusion in any South Australian model are the following;

- amendment to allow environmental upgrade agreements to apply to strata titled buildings;
- a clause which allows Environmental Upgrade Agreements to be entered into by the lessor without the consent of all the lessees of a building; and
- a clause through which lessors are entitled to pass the charges of an Environmental Upgrade Agreement on to the lessees of a building

Next Steps

To give effect to a PACE Scheme, legislative changes would be required as outlined above for the scheme to be created

The Scheme also requires the formal approval of the Adelaide City Council. The Property Council believes that the introduction of such a scheme is in line with the strategic aims, targets and policies of the Council to maintain the 'green' rating of the Adelaide CBD as one of the best in the country.

Additionally, financial institutions would need to be involved. It should be noted that at least one national institution has indicated its support to provide the finance necessary.

Recommendations:

1. Adelaide City Council to pass motion to give effect to their support for PACE.
2. State Government to introduce legislation similar to New South Wales *Local Government Amendment (Environmental Upgrade Agreement) Bill 2010*.



Green Building Incentives

Local government initiatives to green the built environment.

South Australian
Position Paper Series

The Issue

Data released in 2007 by the Australian Sustainable Built Environment Council (ASBEC), showed 23 per cent of Australia's total greenhouse gas emissions can be attributed to the built environment and its users.

Furthermore, the report found that the sector as a whole could reduce its share of greenhouse gas emissions by between 30 to 35 per cent whilst accommodating growth in the overall number of buildings by 2050.

The issue of new buildings has largely been resolved, however there is significant potential to reduce energy use in the built environment by refurbishing South Australia's existing building stock.

Energy efficiency gains delivered by the building sector can reduce the costs of greenhouse gas abatement (cost per tonne of abatement) for all sectors by nearly 14 per cent by 2050.

For these reasons green building practices are considered important to minimise the sector's ecological footprint.

This position paper sets out a clear five point action plan that will incentivise the greening of the existing built environment, as well as delivering savings to tenants.

The State of Play

In the past five years, the property industry in Adelaide has taken a radical shift to incorporate green practices into new developments.

The push has been driven by tenants, developers and buildings owners looking to reduce the effect buildings have on the climate. This has been reflected in the design, construction and upkeep of many key buildings within the CBD.

This push has been primarily driven by the leadership of key tenants, including the State Government and large multinational companies seeking Green Star rated office accommodation.

Adelaide's CBD currently leads the nation with more 5-Star Green Star commercial office floor space than any other city in Australia. This has occurred without any assistance from local government, despite it receiving the social, urban and financial benefits associated with having these developments.

Whilst Adelaide's newer buildings are a showcase to the world of its green credentials, significant opportunities exist with the existing building stock. There is currently little incentive for owners of lower grade buildings to conduct refurbishments to boost their environmental standing.

What We Advocate

To increase green floor space, an incentives program should be established to cover the three main stakeholders of any property development:

1. New building property developers (to incentivise sustainable developments)
2. Existing building owners (to incentivise green refurbishments)
3. Tenants (benefit from reductions in outgoings)

Incentives should be based on the Green Building Council of Australia's Green Star rating tools. This is a holistic tool used by the State Government and major tenants to form the basis for green leases.

The Property Council calls on local government to immediately adopt the following five point action plan:

1. A completed development should receive a sliding scale council rate reduction, based on its 'As Built' Green Star Rating; a 5-Star building receiving 20 per cent reduction, with 6-Star buildings receiving 40 per cent.
2. A 5-Star Green Star design (or above) development application lodged with council must be processed by its planning department as a higher priority than non Green Star development applications.
3. A development application should receive a scaled development lodgement fee rebate. This would be based on its Green Star 'As Built' rating. A 5-Star rated building receives a 50 per cent rebate and a 6-Star receives a 100 per cent rebate once rated 'As Built'.
4. Buildings built to 5 and 6-Star Green Star specifications should be entitled to increased gross floor areas in their respective planning zones. For instance, a 5-Star design building would be allowed a 10 per cent increase in gross floor area and a 6-Star design, an additional 20 per cent.
5. An incentives program should be established to assist building owners to bring existing building stock up to a Green Star standard.

The Outcomes

By adopting the five point action plan to encourage the construction and upgrading of the built environment, South Australian councils will establish the necessary framework to reduce their greenhouse gas emissions.

This will result in significant reductions in energy and water use, as well providing for better buildings and attracting more workers to South Australia.

It will send out a positive message about South Australia's environmental credentials, establishing a local government benchmark, and assist the state in achieving several key targets set out in *South Australian Strategic Plan*.

Produced by the Property Council's Sustainable Development Committee



David Cooke
Committee Chair
Hames Sharley



Nick Rosshirt
Committee Vice Chair
Bestec



Adrian Marshall
Adelaide City Council



Andrew Suttie
Rider Levett Bucknall



Chris Watkins
Hassell



Fraser Bell
Finlaysons



Hayley Pointer
PB



James Redwood
Hansen Yuncken



Graham Dyus
Bestec



James Young
Colliers International



Jarrod Lengs
Candetti Constructions



Lorne McClurg
Coffey Projects



Mark Stefanac
Bassett



Mary White
Hassell



Matthew Salisbury
Lincolne Scott



Megan Antcliff
Woods Bagot



Stephanie Bolt
Adelaide Airport Limited



Sue Chenery
DLA Phillips Fox



Tabe Voigt
Lincolne Scott



Gerry Green
Partek

The Property Council of Australia is the chief advocate for the property investment and development sector. It champions its members' interests by engaging governments on key public policy issues, as well as creating a more informed and connected marketplace.

Our members help shape, build and finance our cities. These organisations have a long term interest in the future of Australia's urban areas.

They include the bulk of the State's investors in office towers, shopping centres, industrial parks, tourism accommodation and major residential developments.

There is \$33 billion invested directly in property in the state of which nearly \$5 billion is invested by institutions in South Australian property. More than half a million South Australians now have a stake in investments through their superannuation, life insurance, managed fund property trusts, syndicates and direct ownership investments.

For more information, please contact:
Nathan Paine
Executive Director, Property Council of Australia (SA)
Phone: (08) 8236 0900
Email: npaine@propertyoz.com.au

The Voice of Leadership

142 GAWLER PLACE ADELAIDE SA 5000 - GPO BOX 2190 ADELAIDE SA 5001
PH 08 8236 0900 - FAX 08 8223 6451
www.propertyoz.com.au
ABN: 13 008 474 422

South Australian Freight Council

Monday, 31 October 2011

Ms Lauren Grigg
CCGER Act Review
Sustainability and Climate Change Division
Department of the Premier and Cabinet
GPO Box 2343
Adelaide SA 5001

Dear Ms Grigg

Re: Climate Change and Greenhouse Emissions Reduction Act 2007 Legislative Review 2011 Discussion Paper

The South Australian Freight Council Inc (SAFC) is South Australia's peak, multi-modal freight and logistics industry group that advises both the Federal and State governments on industry-related issues, and is funded by both governments and industry. SAFC represents road, rail, sea and air freight modes and operations, freight service users, and assists the industry on issues relating to freight logistics across all modes.

The South Australian Freight Council is committed to driving environmental sustainability in the transport and logistics industry. Our Sustainable Supply Chains Working Group is comprised of industry and State Government representatives and assumes responsibility for environment issues affecting the industry. Therefore, SAFC are very pleased to have been provided the opportunity to offer input to the 2011 review of this legislation.

In general terms, the Council is supportive of the intentions of the State Government's proposed changes to the Act, on the basis that they are line with a national approach to climate change policy, and compatible with international programs.

Below are some specific comments on various sections of the discussion paper. The Council believes that careful consideration should be made when amending the Act to ensure it achieves its aims whilst simultaneously minimising any negative impacts that might accrue to the South Australian economy.

Greenhouse Gas Reductions

The Council supports the move to align South Australia with the majority of other Australian states in moving the baseline year from 1990 to 2000. However it may be prudent for the government to conduct a study into the long-term economic impact of the new 'ambitious' headline target for the state as it may be less competitive than other states should they decide to implement less aggressive targets.

Emissions Reduction Pathway

The Council supports the omission of an emissions reduction pathway in the Act for the numerous reasons outlined in the discussion paper, but especially due to possible inconsistencies with the federal carbon pricing legislation.

Renewable Energy Generation Target

SAFC notes that the previous generation target was achieved ahead of schedule, due to high levels of investment in installed wind power capacity. The discussion paper proffers wind power and domestic solar photo-voltaic infrastructure as adding to the levels of generation from renewable energy sources. The paper also highlights research from a 2009 report on the possibility of geothermal technology being a major source of renewable energy for the state by 2020.

Whilst SAFC in no way wishes to denigrate the Renewable Energy Generation Target, nor individual technologies that may facilitate achievement of that target, recent events could make achievement of the target difficult. For example current legal challenges could disrupt future plans to develop wind farms across the state (*Case put wind farms in doubt*, The Australian, October 14, 2011, <http://www.theaustralian.com.au/national-affairs/state-politics/case-puts-wind-farms-in-doubt/story-e6frgczx-1226166246134>) and there are various impediments to the geothermal energy industry which saw a recent report state "...there would be no significant geothermal contribution to the Government's RET (renewable energy target) in the foreseeable future." (Allen Consulting Group 2011, *Australia's Geothermal Industry: Pathways for Development*, prepared for the Australian Centre for Renewable Energy, February, 2011. p. vii).

The Council understands the desire to align the renewable energy generation target in the Act to that of the South Australian Strategic Plan, however these recent developments should be further discussed before any target is mandated in legislation.

Renewable Energy Consumption Target

The South Australian Freight Council supports the paper's reasons in removing the consumption target from the Act, but also because set targets for renewable energy consumption has the potential to increase the price of energy in South Australia.

The Council is eager to in work in partnership with Government and business to ensure a viable and vibrant future for all South Australians.

The South Australian Freight Council would be pleased to facilitate discussions amongst stakeholders with a view to establishing a sector agreement between the SA Government and the South Australian transport and logistics industry to further enhance environmental outcomes. Please contact me on the numbers listed below in this regard.

Yours faithfully



Neil Murphy
Chief Executive Officer
South Australian Freight Council Inc

C/o Flinders Ports Limited, 296 St Vincent Street, Port Adelaide SA 5015.

Telephone: (08) 8447 0688 Facsimile: (08) 8447 0606 Email: murphy.neil@safreightcouncil.com.au

The South Australian Freight Council Inc is proudly supported by both the Federal and State Governments with significant in-kind support from Flinders Ports Limited and Adelaide Airport Limited.

UniSA School of Law

Submission to the South Australian Government on the Discussion Paper on the Legislative Review 2011 of the Climate change and Greenhouse Emissions Reductions Act 2007

by Associate Professor Karen Bubna-Litic, School of Law, UNISA¹

Ph: (08)83029956

Email: Karen.bubna-litic@unisa.edu.au

My feedback relates to two parts of the discussion paper. Most of this submission relates to requested feedback in relation to vulnerable and disadvantaged communities with a particular focus on indigenous communities as I have produced research into these areas over the past three years. I make a final comment on the proposal to remove the renewable energy consumption target.

1) Suggested legislative amendments to policies relating to vulnerable and disadvantaged groups and to aboriginal communities

As the discussion paper rightly points out at p.38, socially or economically disadvantaged communities have a high vulnerability to climate change impacts.

As the discussion paper also points out, the Commonwealth Government has recognised this in its Clean Energy Future policy and its household assistance package makes provision for this disadvantage². For this reason, it would be a duplication to include the amendments specified on p.38 in relation to 'the most vulnerable and disadvantaged members of the community'.

However, the research which I have undertaken indicates that indigenous communities are a particular type of disadvantaged community in terms of the impact of climate change and carbon pricing and special provision needs to be made so that indigenous communities do not face a disproportionate burden due to the impacts of both carbon pricing and climate change.

¹ The author has recently moved to South Australia, having been at the University of Technology, Sydney since 1994. Her expertise is in the field of environmental law with a particular focus on Climate Change and Corporate Environmental Responsibility, publishing extensively in these areas. In 2009/2010 she and a colleague from the University of Ottawa, Canada received a grant from the Canadian government to research and provide a policy brief on the issue of fairness of carbon pricing policies, with a particular emphasis on vulnerable communities. The result was comparative research of carbon pricing in Canada and Australia using indigenous communities as a case-study. A policy brief titled "Carbon Pricing and Fairness", based on this research was published by Sustainable Prosperity in July 2011.

² <http://www.cleanenergyfuture.gov.au/clean-energy-future/our-plan/cameo-tables/>

The impacts of climate change on indigenous communities has been well documented by the IPCC³ and the proposed amendments on p.39 cover the issue of consultation with indigenous communities to consider their needs in relation to the impacts of climate change.

In Australia, indigenous communities are more vulnerable to the impacts of climate change due to poverty, remoteness, and their reliance of the 'hybrid economy'⁴ and they often have less access to education and skills that are needed to understand the impacts and take advantage of the opportunities offered by a carbon-constrained world.⁵ For example, poverty can lead to the inability to have adequate housing infrastructure to deal with the impacts of climate change, such as storm damage. In Australia, the population of remote and very remote areas are made up of 25% of the indigenous population and 2% of the non-indigenous population. There are a disproportionately high number of aboriginal Australians living in remote areas. Climate change will impact remote tourism, which are often managed by indigenous communities. Emergency responses to extreme weather events can be slow in reaching remote indigenous communities and although extreme climactic events such as storms can be managed through active land management, in remote areas, these threats can be exacerbated because there are too few people to respond with land management practices. Isolated communities may also have limited infrastructure and limited support from technologies such as early warning devices.⁶

Climate change may result in the loss of access to the hybrid economy resources through changes in distribution of species and species abundance as a result of climate change impacts on biodiversity. This will further impoverish indigenous communities.⁷⁺

The comparison undertaken with New Zealand highlights two other issues. The first is the inadequacy of the capture of statistical data for indigenous Australians. The second is the advantage that Maori have under the Treaty of Waitangi to be consulted on matters likely

³ Intergovernmental Panel on Climate Change, *Climate Change 2007- Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge: Cambridge UP, 2007), online: IPCC <<http://www.ipcc.ch/ipccreports/ar4-wg2.htm>>

⁴ The hybrid economy is a reliance on hunting and fishing. The 2002 NAATSIIS showed that 80% of adults living in discrete indigenous communities fished or hunted for their livelihood. Australian Bureau of Statistics, 4714.0 - *National Aboriginal and Torres Strait Islander Social Survey* (2002), online: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4714.0Main+Features12002>

⁵ Bubna-Litic, K, "The Impacts of Carbon Pricing on Indigenous Communities: A Comparison of New Zealand and Australia", Ch. 20 in Lye, LH, et al (ed) Critical Issues in Environmental Taxation: International and Comparative Perspectives Vol VII 2009 Oxford University Press, p.349 at 352

⁶ Ibid, 359

⁷ Ibid, 357

to affect them. The author has argued that it is crucial to involve the indigenous population in setting carbon pricing policy.⁸

It is for these reasons that I support the proposed amendments on p.39 of the Discussion paper.

Specifically, I would add another objective into s3 to read,

“(I) to consult with Aboriginal people and communities in order to determine their needs in relation to the impacts of climate change on their communities, and to develop and implement strategies to mitigate these impacts”

I would support consequent amendments to ss6 and 14 to implement this objective as well as a requirement in the reporting provision in s7.

Returning to the suggested amendments on page 38 of the discussion paper, and my previous comment that as they stand these amendments would result in a duplication with the Commonwealth Assistance package, I would like to argue that indigenous communities will be uniquely disadvantaged by the introduction of a carbon price and renewable energy target and need specifically targeted assistance, not necessarily covered by the Commonwealth Government’s compensation package and so provision should be included in the South Australian legislation.

We know that carbon pricing policies are inherently regressive.⁹ Indigenous communities are uniquely disadvantaged by a carbon price due to four factors – poverty, remoteness, housing and employment.

Because they are disproportionately represented in lower income categories, indigenous Australian’s bear a greater proportion of a carbon price’s regressivity. Indigenous Australians are disproportionately represented amongst Australia’s low income households.¹⁰ They are more than twice as likely as other Australians to be in the lowest income quintile, and almost four times less likely to be in the highest quintile.¹¹ The measure of financial stress, or the poverty indicator, is a household's ability to raise \$2,000

⁸ Ibid.

⁹ Sustainable Prosperity, Policy Brief, “Carbon Pricing and Fairness” July 2011
<http://www.sustainableprosperity.ca/article1626>

¹⁰ . Australian Bureau of Statistics, 47130DO001 *Population Characteristics, Aboriginal and Torres Strait Islander Australians 2006* online: ABS
<[http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/BD4AECC58BB2B974CA257718001E0CBC/\\$File/national%20tables47130do001_2006.xls](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/BD4AECC58BB2B974CA257718001E0CBC/$File/national%20tables47130do001_2006.xls)>.

¹¹ Ibid.

within a week in an emergency¹². Comparing the 2008 NATSISS and the 2006 General Social Survey, 47% of the indigenous population was under financial stress. This compares to 13% for the non-indigenous population. This means that cost increases will disproportionately impact indigenous communities in non-remote, urban areas because they make up a disproportionate percentage of the lowest income quintile.¹³ This also means that many indigenous people do not earn enough income to pay tax and consequently cannot avail themselves of the tax breaks under the Commonwealth government's assistance package.

The question of remoteness is relevant when considering a community's dependence on energy-intensive goods and services and transportation. Remote area indigenous communities are dependent on private transport options as they travel large distances to access services, such as shopping, schooling and medical care, and public transport options are not available. As energy costs rise, the impact upon remotely located communities will be greater than those facing shorter distances and lower costs to access basic necessities.¹⁴

Australian governments have provided incentives for the uptake of energy efficiency measures such as household retrofits, insulation rebates, solar panel rebates, solar hot water rebates as well as rating systems to encourage the purchase of energy efficient appliances. There are significant barriers and market failures to the uptake of energy efficiency measures in low income households.¹⁵ These will be exacerbated in indigenous communities due to their remoteness, poor quality housing and high percentage of renters. In very remote areas, non-indigenous households were 8 times more likely than indigenous households to own their own homes.¹⁶ This indicates that the impacts of a carbon pricing policy on those households who rent,¹⁷ will disproportionately impact on indigenous

¹² This measure is an ABS indicator, introduced in the 2001 Census and expanded in the 2008 NATSISS. Australian Bureau of Statistics, 4714.0 – *National Aboriginal and Torres Strait Islander Social Survey, 2008* (2008), online: ABS <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4714.0Main%20Features112008?opendocument&tabname=Summary&prodno=4714.0&issue=2008&num=&view=>. Accessed 6 September 2011

¹³ Bubna-Litic, K and Chalifour, N, "Are Climate Change Policies Fair to Vulnerable Communities? The Impact of British Columbia's Carbon Tax and Australia's Proposed Emission Trading Scheme on Indigenous Communities" (forthcoming 2011).

¹⁴ Ibid.

¹⁵ Damian Sullivan and Josie Lee, "A National Energy Efficiency Program for Low-Income Households: Responding Equitably to Climate Change" in Imogen Jubb, Paul Holper and Wenju Cai, eds., *Managing Climate Change: Papers from the Greenhouse 2009 Conference* (Collingwood: CSIRO Publishing, 2010) 155

¹⁶ Bubna-Litic, K and Chalifour, N, "Are Climate Change Policies Fair to Vulnerable Communities? The Impact of British Columbia's Carbon Tax and Australia's Proposed Emission Trading Scheme on Indigenous Communities" (forthcoming 2011).

¹⁷ The nature of this disadvantage is that they find it hard to derive benefit from emission reduction initiatives. Renters have less incentive to outlay the capital costs of emission reduction activities such as insulation, renewable energy options, hot water systems and cooking appliances.

populations, with a higher burden in remote Australia. Funding for targeted home visits may help to break down some of these barriers.¹⁸

There is also an issue of overcrowding in indigenous households and the need to renovate housing infrastructure to accommodate larger numbers depends upon financial resources and increased costs for home construction and maintenance could impede progress on addressing overcrowding.

Finally, some sectors of the economy will be more vulnerable to the impacts of a carbon price. The sector most likely to be affected by carbon pricing is the mining sector and statistics from the Australian Bureau of Statistics in 2006¹⁹ show that there was a higher percentage of total employment, of indigenous workers than non-indigenous workers in the mining industry, administration, safety and support services, education and training, and health care and social assistance. It therefore seems that an unfair burden may fall on indigenous workers due to their employment in these impacted sectors, though there needs to be more up to date data in this area.

Considering the evidence described above and arguing that climate policies should not leave the least well off in worse shape²⁰, and arguing that the Commonwealth government has not recognised that indigenous communities will bear a disproportionate burden of a carbon pricing policy, I would argue that this legislative review needs to include some specific amendments akin to those described on p.38 of the discussion paper. However, for the reasons given above, the amendments need to substitute 'indigenous communities' for 'the most vulnerable and disadvantaged members of the community'.

2) Removal of the renewable energy consumption target

Having read the comments on pages 31/32 of the discussion paper, I make the following point.

Despite the points made in the discussion that the only effective public policy action available is that of the SA Government's own consumption, as well as the issue of non-complementarity, I would like to see the consumption target maintained. Having a consumption target may encourage consumers to exercise discretion over their renewable energy consumption. Anecdotally, my Energy Law students have been amazed to learn

¹⁸ Sullivan and Lee, *supra* note 15

¹⁹ Australian Bureau of Statistics, 47130DO001 *Population Characteristics, Aboriginal and Torres Strait Islander Australians, 2006* online: ABS
<[http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/BD4AECC58BB2B974CA257718001E0CBC/\\$File/national%20tables47130do001_2006.xls#Table_23!A1](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/BD4AECC58BB2B974CA257718001E0CBC/$File/national%20tables47130do001_2006.xls#Table_23!A1)> at "Table of Contents".

²⁰ Sustainable Prosperity, Policy Brief, "Carbon Pricing and Fairness" July 2011
<http://www.sustainableprosperity.ca/article1626>

about the renewable energy options available in South Australia and the opportunities that exist. I was amazed at how ignorant they were and would prefer to see more rather than less education and recognition relating to renewable energy. Keeping the renewable energy consumption target would be one small step. It would also continue to focus the SA government on its energy consumption.