UQ *climate for change*

Climate Change & Sustainability Network
University of Queensland, Australia

The Secretary
Senate Select Committee on Climate Policy
PO Box 6100
Parliament House
CANBERRA ACT 2600

SUBMISSION TO THE INQUIRY INTO THE CPRS WHITE PAPER

To the Senators on the Senate Select Committee on Climate Policy,

Emissions trading could form an effective part of Australia's strategy for mitigation of climate change, but only if it is well-designed, if its targets are sufficient and responsive to scientific understanding of climate change and of our need to contribute to equitable global solutions, and if it is complemented by a range of other policy initiatives to incentivise and regulate the transition to an efficient, sustainable economy.

We are deeply concerned that the proposed Carbon Pollution Reduction Scheme (CPRS) will fail in all of these objectives, incurring immense costs to our environment and society, and our chances of preventing runaway climate change.

We call on your enquiry to address the following major concerns:

- Unacceptably weak targets that threaten both national and global efforts to mitigate climate change.
- Allocation of free permits to major polluters and the creation of rights to pollute that must be compensated if stronger targets are implemented.
- Direction of revenue to enabling business-as-usual to continue, thereby undermining the capacity of the carbon price signal to effect behavioural and structural change, and providing almost no capital for building a low-carbon society.
- Unlimited use of international credits to meet Australia's targets.
- The need for an overarching strategy to reduce emissions through a range of complementary measures.
- The urgency of both the timing and the sufficiency of our actions to mitigate and adapt to Climate change, i.e. to act on the information currently available, to be responsive to developing knowledge, and to avoid delays that will only increase the future needs for mitigation and adaptation efforts.

---

1) EMISSIONS REDUCTIONS TARGETS:

Adequacy or otherwise of the Government's 2020 and 2050 greenhouse gas emission reduction targets in avoiding dangerous climate change

The range of targets given in the CPRS legislation would reduce Australia's greenhouse gas emissions by only 5-15% below 2000 levels by 2020.

This target runs counter to the Government's own stated goal of contributing to greenhouse gas stabilisation at 450 parts per million, negates any concept of Australia's fair share in the distribution of global efforts, and must be urgently reviewed.

In 2007, the Intergovernmental Panel on Climate Change concluded that a target of 450ppm for stabilisation of the earths' greenhouse gas concentrations would require developed countries to reduce their total emissions by 25 to 40 % below 1990 levels by 2020. New insights into the feedback mechanisms and climate observations presented at last week's climate science conference in Copenhagen evinced the need for far deeper and faster cuts and a lower stabilisation target for global atmospheric concentrations, if many of the most devastating consequences and most intense risks are to be avoided.

For Australia to set a target range of only 5-15% is an extremely damaging under-assessment of both our need and scope for economic transformation, and is a complete abdication of our responsibility and potential to contribute to an equitable global solution.

Australia's fair share in a global effort to prevent dangerous climate change (i.e. to give any acceptable chance of preventing would require that we commit to cuts of at least 40% by 2020, and transition as fast as possible to generation of zero or negative net emissions.

Low targets have been defended on grounds of *population growth*. Yet, population growth is optional for Australia. It has been accelerated considerably over the past decade through promotion of fertility and quadrupling of our net immigration intake[1]. This massive re-engineering of Australia (now on track to double population by 2048) was initiated by the Howard Government, but has been accelerated even further under Labor. This is despite economic analyses being at best equivocal about the benefits of further population growth[2], demographic studies demonstrating scope to improve labour force through immigration is small and temporary compared to scope for enhanced participation rates[3], and environmental audits[4] and water planning that clearly identify its negative consequences for natural resources and ecosystem services.

According to the CPRS White Paper, Australia's expected 45% population growth between 1990 and 2020 means that a 34% per capita reduction in carbon pollution is needed to achieve only 4% national reduction from 1990 levels. Europe, with slower growth, can achieve 30% total reduction for the same 34% per capita.

If we were to achieve a 34% per capita reduction by 2020, a slight increase in our growth rate could wipe out the gain altogether. We have already increased our growth rate since the estimates used in the CPRS, putting even the pathetic 5% target in jeopardy.

However, immediate adoption of population stabilization strategies could enable us to turn a weak reduction of 4% into a far stronger on, of 20% or more. Indeed, the same investment would yield higher per capita reductions, making higher national targets possible. Population stabilization could be achieved in little more than a decade, and with relatively little population increase, through zero net immigration (which still allows an intake about 10 times our current refugee approvals) and withdrawal of direct government incentives to increase fertility (which might be reviewed after death rates exceed birth rates).

A stable population inherently has a lower energy demand than a growing population, because infrastructure creation is inherently highly energy intensive, and depends to a large extent on mobile energy which is more difficult to provide from renewable sources. Concrete manufacture also requires carbon dioxide emissions, and the higher density of dwellings, the higher their dependence on concrete materials.

Yet the Department of Climate Change and Water refuses to discuss population, and claims it is not in their mandate to question Australia's population policy. The problem is that Australia has no population policy. No ministry is mandated to review or uphold Australia's best interest in this regard.

A minimum recommendation from this Senate Inquiry should be for multiple population policy options, and their consequent population trajectories, to be modelled in terms of their impact on emissions reductions. A Senate Inquiry into Australia's population options should be initiated.

Emissions Targets: Recommendations:

- Australian National target to reduce emissions by at least 40% below 1990 levels by 2020
- Ensure that domestic greenhouse gas emissions peak no later than 2010;
- Commission research to quantify and assess emission reductions scenarios that would enable stabilisation of greenhouse gas concentrations at or below 350 ppm, with the aim of limiting increases in mean global temperature to less than 1.5oC above pre industrial temperatures.
- Commission research to assess multiple options for population policy, and their consequences for population trajectories and implications for per capita emissions reductions required to meet the total reductions necessary for a safe climate.

---

[1] ABS, 3101.0 - Australian Demographic Statistics, Sep 2008. Released 18/03/2009. http://www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0?OpenDocument

[2] Productivity Commission 2006. Economic Impacts of Migration and Population Growth http://www.pc.gov.au/__data/assets/pdf_file/0006/9438/migrationandpopulation.pdf

[3] Betts, K. 2008. Population ageing in Australia: policy implications of recent projections. People and Place 16(4),43-51

[4] State of the Environment reports from Vic, NSW and Qld.

EMISSIONS PERMIT ALLOCATIONS

Allocation of free permits runs counter to the aim of generating a valid price signal, and has been criticised severely by esteemed economists such as Prof. Ross Garnaut and Prof. John Quiggin. We advocate 100% auctioning of permits.

Ultimately the continuation of polluting practices, and the failure to include them in the price signal, transfers these costs onto our environment and society, and onto industries that are not granted compensations. This problem is exacerbated by creating emissions permits as property rights, and by committing to pay compensation to permit holders for 5 years if the trajectory of emissions cuts needs to be strengthened over this time.

Finally, this policy diminishes the auctioning revenue that could otherwise be directed far more effectively, for example to assisting households and small businesses, the development of clean industries, and urgent needs for financing clean development and climate adaptation in developing countries. Many of the world's poorest people will suffer earliest and most intensely from the consequences of climate change, despite contributing so little to its causes. These communities are far more in need of assistance and deserving of compensation than the corporations identified in the CPRS.

Assistance to emissions intensive trade-exposed industries should be given only at the point of export and only when export is to a country lacking domestic emissions trading. We further suggest levying imports from countries that lack emissions trading, to level the playing field for domestic producers and prevent movement of production to the least environmentally responsible sources. The ability to levy imports, if their embodied emissions have not been paid for under an internationally compliant scheme, should be tabled at the Copenhagen meeting, to ensure that free trade mechanisms are not used to undermine the emissions price signal.

Pemit Allocation Recommendations:

- Full auctioning of emissions reductions permits
- No ceiling on the price of emission permits, unless essential during a brief introductory period
- Any assistance to trade-exposed industries should be directly for adjustment costs, and should occur via payments not free permits. Assistance should be given only at the point of export to a country that does not have comparable emissions reductions requirements.
- At Copenhagen, Australia should support transparent and equitable trade regulations and prevent free trade obligations from undermining global emissions reductions efforts – for example Australia should support the ability of nations to apply levies on imports if their embodied emissions have not yet been accounted under an internationally compliant scheme.
- Measures must be included that enable the Government to make reductions in emissions trajectories in response to new understanding or international agreements, without locking the nation into years of compensation to businesses.

REVENUE DISTRIBUTION

The CPRS offers an unprecedented opportunity to generate funds for transitioning to a low-carbon economy, yet the proposed legislation would squander this opportunity. Furthermore, the proposed revenue distribution prevents the emissions price signal from affecting its intended changes in behaviour. Rather, it locks in current behaviours, to the disadvantage of low-emissions alternatives.

The assistance to households (currently 50% of revenue) should not be in the form of cash payments. The increased cost to households does not justify this, and it discourages energy savings by removing the price signal. It should be used to fund home retrofitting including solar hot water, insulation, draft control and window coverings. It may be used to provide no-interest, fixed term loans for the purchase of low-emissions vehicles, higher energy efficiency features in new homes or renovations, or renewable electricity. A proportion of this allocation should contribute to new public transport infrastructure, including inter-regional rail networks to get freight off the roads and provide passengers with realistic alternatives to driving or flying. This expenditure will reduce cost-of-living impacts of a carbon price on households, and so still

enable households to receive the benefits, but through mechanisms that directly reduce demand for generation of emissions.

None of the revenue should be used to reduce or distort the price signal on emissions. As this is the effect of Fuel tax adjustments and industry assistance allocations, they should not be allowed.

Given that the initial quota of emissions permits will be little less than our current emissions, the price of permits will not be onerous. The impact on industry is vastly exaggerated. Businesses with high emissions intensities may well be negatively impacted by reductions in sales through client substitution of lower-emissions options. This is precisely the signal we need for the market to deliver best allocation of resources to meet people's needs. The industry assistance offered in the package undermines market integrity.

The tiny allocation for Climate Change Action ($0.7 Billion out of $12 Billion total revenue) is a disgrace, yet even this amount is misallocated. None of it is targeted at substantive projects for climate change adaptation (which might include, for example, replacing unlined irrigation channels with pipes, or buying properties to return their water allocations to river systems). Most of the Climate Change Action allocation is squandered on yet another hand-out to the coal industry, to pay for emissions abatement at the dirtiest mines, where methane pours into the atmosphere from the exposed coal surface. Such mines should be phased out, not propped up. Note that these emissions are not included in the accounting of efficiency of carbon sequestration and storage. They are not included in the emissions footprint of coal-fired electricity. They are emissions that are off the books in terms of our national emissions tally because they are not adequately measured. However, because they are actually so large, the Government hopes to record a big emissions reduction by abating them. It is the coal industry's responsibility to abate these emissions. They are part of the cost of its product, and should be reflected in the price of coal. The fact that this is a direct subsidy to the coal industry, increasing its already unfair advantage over renewable energy, is not acknowledged in the White Paper.

A much larger allocation should be made for climate change action, to fund real projects of public interest.

In addition, a significant allocation (perhaps 20% of the total revenue) should be made for international assistance for climate change adaptation and sustainable development in developing countries.

Revenue Distribution Recommendations:

- Assist households affected by changing economic conditions, through measures that directly reduce demand for generation of GHG emissions.
- Support research and development of renewable energy sources and resource-efficient technologies
- Fund putlic-interest projects for 'climate change action' that directly assist mitigation and adaptation
- Support international financing for developing countries, to support NAMAs (Nationally Appropriate Mitigation Actions) and climate change adaptation.

INTERNATIONAL CREDITS

We support the flow of finance from developed to developing countries, to assist them in reducing greenhouse gas emissions, preserving biodiversity, developing sustainably and adapting to climate change.

However, the international trade of carbon emissions permits is NOT an appropriate means to achieve these goals.

The achievement of Australia's emissions targets by outsourcing is directly counter to the concepts of Contraction and Convergence, or of Greenhouse Development Rights, as frameworks for international equity that is essential for any agreement to be effective.

Both frameworks require developed countries to reduce emissions *more* than the aggregate target, thereby allowing more modest reductions, or even increases, in emissions by developing countries, so that they are able to continue to improve standards of living. The unlimited international trade of Australian emissions permits means that we need reduce emissions within Australia by only a fraction of our stated commitment (or not at all). Other nations will then be required to meet any of their own obligations *additional* to the reductions that have been sold to us. In the case of REDD, this leads to a de facto transfer of property rights, since a REDD emissions credit places lasting conditions on land use. This does not enable convergence

between developed and developing countries in any sense. Rather it forces further *divergence* – the gap between our per capita emissions and theirs will widen, and their options for development diminish.

Stabilization of global greenhouse gas levels will require prevention of biomass loss, and where possible, biomass gain, *in addition to* reduction in energy and process emissions.

Free trading between *biomass* emissions credits and *fossil fuel* emissions credits removes the additionality required to achieve this. This should not be allowed either internationally or within Australia.

The costs and substitution options for land-use and biomass are very different from those for energy and process emissions. It is inappropriate to try to manage both under the same price signal.

A separate market should be created for biomass, verified through an audit of Australia's total biomass.

Because of limited substitution possibilities for land-use based emissions, it is unrealistic to expect that the global biomass emissions trajectory will enable us to reach even the overall target for 450 ppm, and therefore steeper reductions in energy and process emissions are needed to compensate for this[5]. The free trade in permits between these categories disguises weaker-than-scheduled fossil carbon emissions, and potentially leads to double counting of biomass emissions reductions, as it is unclear how the credits will be deducted from total biomass audits.

While change in fossil carbon stocks is permanent, change in biomass stocks cannot be guaranteed in perpetuity. No legal contract of permanence can prevent biomass loss due to climate change, for example by increases in wildfires.

The CPRS legislation intends to pay credits for preservation of biomass that may have otherwise been removed (but which does not add to the total of carbon sequestered in biomass). Such payments have a strong basis in principles of equity, to off-set opportunity costs of foregone clearing. However, protection of existing biomass does NOT result in *additional biomass* to sequester *additional fossil fuel emissions*. There is no true off-set unless ecosystem-stored carbon is actually and permanently increased.

Based on the above points, we argue that energy and process emissions should not be tradable with REDD or other biomass and land-use based emissions. A price signal does need to be generated on the latter, but since the parameters for accounting and attributing them in perpetuity differ so widely between the two categories, combining them in a single market will only corrupt the accounting of both.

Energy and process emissions can ultimately be verified from the rate of fossil fuel extractions, but is meaningless if there are unquantifiable exchanges with biomass. Likewise, biomass emissions can be verified through total biomass audits, but are meaningless if an unquantifiable proportion of this should be discounted as fossil off-sets.

Any trade in credits must transparently address the questions of the real **'equivalence'** of emissions reductions *i.e.* whether they involve **permanent** prevention or removal of greenhouse gases from the atmosphere, whether they are genuinely **additional**, whether they prevent **leakage / displacement** of emissions-generating activities to other places, and whether they are fully consistent with the **human rights** of all affected communities.

The CPRS allowance for unlimited international credits is unacceptable and runs the risk of enabling pollution within Australia to continue, with little, or no, global reduction in our impacts.

Credit Trading Recommendations:

- Clear limits should be set on the use of international credits within an Australian trading scheme, ideally zero and definitely below 20%
- Strong systems must be in place for measurement and verification of any international credits.
- Energy and process emissions should not be tradable with REDD or other biomass and land-use based emissions.
- Biomass-based emissions should either be covered by a completely separate, non-market system of accounting and incentives, or should form a completely separate market in carbon credits.

---

[5] Anderson, K. and Bows, A. 2008. Reframing the climate change challenge in the light of post-2000 emissions trends. Phil. Trans. R. Soc. A. http://www.tyndall.ac.uk/publications/journal_papers/fulltext.pdf

- Australia should support strong international mechanisms to assist developing countries to reduce the deforestation and degradation of ecosystems, and to implement low-carbon pathways for development. This responsibility is *additional* to large reductions in emissions within Australia.

COMPLEMENTARY MEASURES

It is essential that the federal government implements other policies alongside an emissions trading scheme to strengthen incentives for change and to drive changes in areas that are not covered by emissions trading. The measures that have the greatest potential to contribute to reductions in Australia's greenhouse gas emissions are:

- commencement of a Senate Inquiry into policy options to stabilise Australia's population
- a strong mandatory renewable energy target of at least 40% by 2020,
- strong and consistent feed-in tariffs for renewable energy generation (whose overall impact and cost-effectiveness well demonstrated in countries such as Germany),
- energy efficiency standards for appliances and buildings (residential, commercial and industrial), and fuel efficiency standards for all vehicles,
- major public investment in sustainable transport systems to enable efficient freight and passenger movement,
- reduction in land-use based emissions and through changes in soil management, livestock production, and reductions in the logging of Australia's native forests (as highlighted in the ANU's recent 'Green Carbon' report). As stated above, biomass and land-use based emissions must not be

This may be one of the most important Senate enquiries ever held in this country, and we ask you to ensure that Australia's climate policies have a strong ethical and scientific basis, and will enable us to live up to our earlier promises and our immense potential to contribute to a just, equitable and effective global response to climate change.

Yours sincerely,

Jessie Wells, on behalf of UQ Climate for Change.
School of Biological Sciences, University of Queensland, QLD 4072 jessie.wells@uq.edu.au

UQ Climate for Change is an independent group formed by students and staff at the University of Queensland to generate awareness and action on issues of environmental sustainability, and most urgently, on climate change.