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The Secretary
Senate Select Committee on Climate Policy
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CANBERRA ACT 2600

CC: The Hon Kevin Rudd, Prime Minister of Australia, Senator the Hon Penny Wong Minister for Climate Change and Water, The Hon Peter Garrett AM, Minister for Environment, Heritage and the Arts, The Hon Malcolm Turnbull, Leader of the Opposition, The Hon Greg Hunt, Shadow Minister for the Environment, The Hon Senator Bob Brown, Leader of the Australian Greens, The Hon Senator Christine Milne, Deputy Leader of the Australian Greens

Submission to the Senate Select Committee on Climate Policy

INTRODUCTION

The Government's own commissioned research, the *Garnaut Climate Change Review*, published in October 2008, has reported the following findings as a prelude to the introduction of an emissions trading scheme as the principal tool for reducing Australia's greenhouse gas (GHG) emissions :

Australia's per capita emissions are the highest in the OECD and among the highest in the world. Emissions from the energy sector would be the main component of an expected quadrupling of emissions by 2100 without mitigation.

Australia's energy sector emissions grew rapidly between 1990 and 2005. Total emissions growth was moderated, and kept more or less within our Kyoto Protocol target, by a one-off reduction in land clearing.

Relative to other OECD countries, Australia's high emissions are mainly the result of the high emissions intensity of energy use, rather than the high energy intensity of the economy or exceptionally high per capita income. Transport emissions are not dissimilar to those of other developed countries. Australia's per capita agricultural emissions are among the highest in the world, especially because of the large numbers of sheep and cattle.

The high emissions intensity of energy use in Australia is mainly the result of our reliance on coal for electricity. The difference between Australia and other countries is a recent phenomenon: the average emissions intensity of primary energy supply for Australia and the OECD was similar in 1971.¹

¹ <http://www.garnautreview.org.au/chp7.htm> The Garnaut Climate Change Review commissioned by all of the governments of Australia's Federation

Meanwhile, the world's most respected climate scientist, NASA Goddard Institute for Space Studies' Director, Dr James Hansen, states that **catastrophic** climate change and a 'transformed planet'² - will be the result of not taking urgent action **immediately** to bring GHG emissions down to **zero**, combined with strategies to actively cool the planet. Dr Hansen believes that a safe climate cannot exist without polar sea ice and that CO₂ of 300-325ppm (we are currently at 385ppm) is needed to restore it to the state it was in 25 years ago³. Due to inertia in the climate system, climate scientists believe we still have a limited, but rapidly closing, window of opportunity to move to zero emissions and pull excess carbon out of the atmosphere in order to return to 320ppm⁴. Proponents of the status quo, or of gentle transition, are ignoring the current science and would have us head to a catastrophic point of no return.

The Rudd Government entered its term in November 2007 with an overwhelming mandate from the Australian people to take **swift, effective action on climate change**. By any logical definition this would mean identifying the most polluting industries and practices which are responsible for Australia's spiralling GHG emissions and commencing a just transition away from them. On the flip side, this would also present opportunities in cutting edge energy efficiency and renewable energy technologies, which offer more secure and sustainable employment in industries stepping up to meet increasing demand for ecologically friendly technologies, products and services in the domestic and export markets. By way of example, a recent report by the University of Newcastle's Centre of Full Employment and Equity estimates that a shift to a renewable energy economy in the Hunter/Wyong region could generate between 7,500 and 14,300 jobs— **a net gain of between 3,900 and 10,700 jobs**⁵. Note, the lower estimate, while a marked gain on current employment figures, is extremely conservative because it assumes there will be no manufacturing of renewable energy technologies in the region⁶.

Notwithstanding the Government's mandate, its own research findings and its stated policy aims, Australians have been presented with an emissions trading scheme, the CPRS Bill which, as the rest of the world enters a low carbon era, will further entrench Australia in a quarry - that is, one with high volume pollution and low value economy - by protecting, compensating and rewarding our biggest polluters for being just that. To add insult to injury, this rewarding and compensating will be done using Australian tax payers' money. According to financial advisors, Innovest, emission intensive industries will receive over \$3 billion a year in free permits and compensation under the CPRS⁷. In the first year, companies in the aluminium smelting sector are set to receive \$939 million in free permits while alumina refiners will receive around \$251 million. Estimates have put Rio Tinto's share of the pie at \$462 million, while Alcoa is set to receive around \$170 million and Alumina Ltd around \$113 million⁸. And this is additional to the between \$9.3 billion and \$10.1 billion per annum already handed out to private fossil fuel interests by Australian governments in energy and transport subsidies⁹. Thus, what this represents is a massive transfer of public wealth (and fresh air) into the hands of private vested interests that are not accountable to the Australian people.

We are hearing industry spokespeople, commentators and politicians describe emissions intense/trade exposed polluting industries as "important" for the Australian economy, but we are not hearing debate about the grounds for the liberal use of this term "important". To whom and why are they are important

² David Spratt and Phillip Sutton, *Climate Code Red* (Scribe Publications, 2008)

³ *Target atmospheric CO₂: Where should humanity aim?* <http://arxiv.org/ftp/arxiv/papers/0804/0804.1126.pdf> (accessed 9/09/08)

⁴ Ibid

⁵ <http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/just-transition-report.pdf>

⁶ Ibid

⁷ http://www.acfonline.org.au/uploads/res/ACF_RET_EITEs_submission_-_Final.pdf

⁸ Ibid

⁹ Institute for Sustainable Futures report entitled *Energy and Transport Subsidies in Australia 2007 Update* for Greenpeace Australia Pacific;

and on what basis? What is painfully clear is that the CPRS, in its current form, has been crafted to accommodate these so called 'important' emissions intense industries, which have already benefited enormously from Australia's cheap, dirty coal fired electricity and tax payer funded government subsidies.

We would be interested to know whether or not the government has conducted any meaningful research into the real and true economic worth of these industries to the Australian economy (and not just their shareholders). For instance, how many Australians do these companies employ and what percentage of the company is owned by Australians? What is the contribution of these companies to Australia's GDP and on what grounds should Australian tax payers be financially supporting them? What is the opportunity cost for Australia in hosting these polluting industries? How would this compare if the same support and subsidies were given to renewable energy and energy efficient industries so as to stimulate growth and jobs in those sectors?

If this research has been done, the Australian public is entitled to see and test it. Our own analysis of the industries indicates that they are made up of capital intensive, multinational corporations which employ relatively few Australians and send the majority of their profits offshore. We are aware that there is a highly influential, self-serving cable of multinational corporations which is adept at distorting democratic processes in its sole pursuit of profits. As the world's economy shifts towards low carbon alternatives, Australia's increasing emissions liability, arising as a direct result of hosting these dirty industries, will become an even greater burden on our climate, economy and international standing. It is time to ask some serious questions about who these industries really benefit.

Meanwhile, locally owned and run businesses such as wine making, agriculture and tourism to destinations such as the Great Barrier Reef, Kakadu and the snow fields, which are far more valuable to our economy and employ many more Australians and which are already feeling the heat from climate change, will in effect be subsidising polluters to destroy their livelihoods if the CPRS is implemented in its current form. There are around 54,000 people¹⁰ employed in tourism and generating \$5.1 billion in business¹¹ in the Great Barrier Reef surrounds alone; this area being a World Heritage listed site that is under great threat from climate change. Add to this sum the lost opportunity for local green jobs in more secure and sustainable local economies because the CPRS Bill provides a disincentive to create them in Australia. Ultimately the CRPS, in its current form, will result in Australian tax payers paying the worst polluters to continue polluting, instead of supporting ecologically responsible businesses and industries for innovating.

Not only will the CPRS undermine international negotiations to achieve an effective global response to climate change, but it will exploit to the fullest the voluntary domestic efforts already underway to reduce our unacceptably high – some estimates suggest the highest per capita emissions in the world - GHG emissions.

In its current form the CPRS, together with accompanying proposals, will undermine Australia's ability to effectively and swiftly reduce its own emissions growth and make a meaningful contribution to an effective global response, because it will:

- establish as law an extremely weak emissions reduction target relative to those being adopted in other advanced countries and one which falls woefully short of what scientists are telling us we must meet if we are to avoid catastrophic runaway climate change;
- establish, alongside an extremely high emissions ceiling, a floor below which emissions reductions cannot fall, because all reductions achieved will be converted into permits and handed to, and traded for profit by, polluters in yet another artificially created financial market;

¹⁰ <http://www.gbrmpa.gov.au> .

¹¹ The Great Barrier Reef Marine Park Authority, *Agency Budget Statements 2006*.
<http://www.environment.gov.au/about/publications/budget/2006/pbs/pubs/gbrmpa.pdf>>

- undermine **ALL** voluntary schemes and efforts being undertaken by countless concerned citizens, responsible businesses, local and state governments to reduce energy use and emissions because the result of these combined efforts will free up permits ;
- provide free permits and compensation to the heaviest polluters thereby rewarding and protecting old, outdated technologies and energy sources rather than phasing out and restructuring them and redirecting investment into energy efficiency and more widely distributed zero emissions energy alternatives;
- include tax payer funded assistance to existing coal-fired electricity generators which will be in addition to other massive tax payer funded subsidies;
- outsource the responsibility for emissions reductions to underdeveloped countries through the capacity (post Kyoto Agreement) to purchase unlimited carbon credits offshore;
- enable permits to be generated through forestry and sold into the Scheme;
- fail to support improved public and rail freight transport.

We cannot state too strongly that we consider tax payer funded assistance for emissions intense industries, whose outdated technology and practices are forcing climate change and who are only serving minority private vested interests, to be a gross misuse of public funds. Tax payer money should be directed towards achieving the necessary transition to a more sustainable economy capable of protecting our most valuable public asset, our environment, for current and future generations.

We know the big test for Australia, and indeed all countries, will be how to manage the twin challenges of climate change and peak oil. Climate change is here and our environment is already showing the predicted signs of collapse due to excessive GHG emissions in our atmosphere. Anyone with any doubts has surely been woken up from their dream world by the extreme events of this tragic past summer. Further, the era of cheap crude oil for transportation is gone. Given the tyranny of distance and increased vulnerability to the impacts of climate change, it is even more critical and urgent for Australia to prepare itself for the changed economic (due to peak oil) and ecological (due to climate change) circumstances which scientists are telling us with increasing alarm will prevail in the 21st Century.

If Australia is to maintain living standards and quality of life for current and future generations, we must immediately commence a rapid transition away from 'old' centralised and highly polluting fossil fuel based infrastructure and energy sources towards 'new' decentralised and more sustainable alternatives. In addition to drastically reducing GHG emissions, the adoption of renewable energy sources located close to end power users will ensure a more robust and secure power supply than the current one. This is because centralised power supplies are more vulnerable to major disruptions caused by accidents, fires and storms (which are predicted by scientists to become even more frequent and ferocious¹²), accidents and/or deliberate attacks.

Numerous zero emission power sources exist now and, with the right support, offer enormous investment opportunities for new local economies. Even up against the existing massive subsidies favouring fossil fuel energy sources, the **learning curve** (the quickening of technological advances as a result of experience) is now paying dividends for renewables. Already wind, concentrated solar thermal, solar PV, tidal power and geothermal energy sources have been developed and, particularly in the case of wind, innovated rapidly to the point of being competitive in price with existing fossil fuel sources. This has happened even while fossil fuel energy sources have enjoyed a virtual monopoly of the energy market, have been heavily subsidised by public funds and have had the enormous benefit of being able to 'externalise' the costs of their carbon emissions.

¹² Climate Institute of Australia, *Briefing: Intergovernmental Panel on Climate Change Report: Implications for Australia*. January 2007.

A safe climate and healthy environment are the foundations on which all else we know and value depends. The most cited argument for no, or slow and inadequate responses to climate change and peak oil, are driven by a combination of ignorance of the current science, greed by those with vested economic interests, fear of change and the failure to recognise the bountiful economic opportunities that are ready to be taken up. As previously stated, with a transition to a more sustainable economy, in addition to mitigating catastrophic global warming, there will be the added benefit of a boost to our local economies and new, more sustainable 'green collar' jobs.

FEASIBLE SOLUTIONS AVAILABLE NOW

To meet the Government's stated aim of effectively reducing Australia's dangerously high GHG emissions, investment in renewable energy generation and the like need to be supported by appropriate incentives rather than being hampered by unfair competition with high emitting industries who stand to be maintained and supported by massive ongoing subsidies and now, through the proposed CPRS Bill, compensation. This scenario is untenable and belies the Government's stated aim of reducing GHG emissions and supporting an effective global response to the climate emergency.

Slow short term changes will achieve nothing – we have a climate emergency and only emergency measures will have a chance of succeeding – nothing short of Minister Wong in the Ferrari, to pedal to the medal will solve this¹³!

To make the transition to a zero emissions economy, while absorbing CO2 out of our atmosphere as rapidly as humanly possible, we must undertake the following measures immediately:

- 1) Factor into our economy the environmental cost – the true GHG emission toll - of every type of business transaction.
- 2) Phase out all subsidies for fossil fuel based energy and correct the market failures which have fuelled a wasteful, exploitative and unsustainable economy in order to make a transition to a more sustainable and equitable one.
- 3) Legislate for a national Feed-in Tariff (FIT) mandated at 60¢ per kWh, offered for 15 years, paid on the entire output of a system via gross production metering, paid on all renewable energy systems up to 10kW (and at 48¢/kWh for systems from 10-kW-100kW) and paid to anyone who installs renewable energy – households, businesses and community buildings.
- 4) Introduce a simple, fair and transparent carbon pricing mechanism, free of loopholes and distortions, to ensure that ALL GHG emitters pay a high price for their impact on our environment.
- 5) Use proceeds from the CPRS to support a just transition away from polluting practices and to support energy efficiency and renewable energy projects and infrastructure for its distribution.
- 6) Replace our current wasteful energy system with one that provides incentives to conserve energy and reward energy efficiency.
- 7) Redirect investment away from road transportation and towards public transport and rail freight.
- 8) Halt all native forest logging because our forests are our most valuable carbon sinks, water catchments and wildlife habitats.
- 9) Recognise the massive impact of methane and carbon from the livestock industry on our GHG emission toll and commence a rapid scaling down of the breeding and trading of ruminant animals in Australia; the quickest, most efficient means of reducing Australia's GHG emissions now.

Each of these points is elaborated on in the attached Annexure and form an integral part of this submission.

¹³ Reference to Minister Wong's March 2009 comments to the media in relation to the Environment Movement's demands

CONCLUSION

We are already starting this process very late, but in order to protect our environment we must value its real and true worth. The results of not taking this responsible action and experiencing further impacts of climate change will be horrendously expensive (as detailed in the Stern Review¹⁴ and by Professor Garnaut). Yes, some jobs will be lost, but other more sustainable and secure jobs will be created. Yes, it will cost money, but it's a matter of redirecting existing and planned expenditure to those sectors that can support and achieve reduced emissions. Further, we only have to look at a few recent extreme weather events in Australia and around the world to appreciate that the cost of inaction far outweighs the cost of taking preventative measures. The more climate change we experience the more costly it will be for the nation's economy.

The Rudd Government's plan to compensate and reward polluters is an outrageous proposition and gross insult to the Australian electorate from a Government who entered office on the declared intent to take effective action to halt climate change.

The current CPRS Act is complicated and riddled with distortions as a result of its exemptions, loopholes, protection and compensation for polluters. It has been called a Sham for good reason – it will not deliver a transition away from polluting practices or adequately support the proven alternative energy sources or energy efficiency measures which will reduce GHG emissions. If the Government was sincere about meeting its election promises to take effective action on climate change then the CPRS would remove ALL public subsidies for fossil fuel energy sources and projects and place a high price on carbon pollution. While this would be an adjustment for our national economy, it will generate many new opportunities and, compared to the costs of damage caused by climate change, would be dirt cheap.

Consider that risk taking for Australian civil engineering projects is in the order of one in a million. When it comes to climate change and the very viability of the Australian environment and economy, and indeed the whole planet, there is no justification for adopting a lesser standard of risk aversion. It is therefore very alarming that our Government is drafting climate change policies based on atmospheric concentrations of GHG ranging between 450 and 550ppm which the IPCC states will lead to catastrophic climate change: the loss of countless species and the remaining life on Earth condemned to an existence of unpredictable and ferocious weather patterns, marked by severe shortages of fresh water¹⁵. Dr Hansen's warnings and dire predictions (and those of many other leading climate change scientists) are even more worrying. No competent business adviser would advocate a risk management policy that contemplates exposure to such a high level of risk – it would be highly negligent and reckless to do so. Given that the Government has this knowledge, it cannot responsibly endorse a GHG emissions range of 450 and 550ppm as the target to aim for and as the basis from which to draft climate change policy.

We must take urgent action to mitigate the damage we have already caused. As a developed nation which has greatly profited in the past from polluting, unsustainable industries both here and offshore, we have a responsibility to demonstrate leadership by modelling responsible and sustainable practices. Australia will have little international influence regarding the setting of global targets to combat climate change if it does not adopt strong measures to significantly reduce its own emissions, particularly given that we have amongst the highest per capita GHG emissions.

Australia must move rapidly towards a zero emission economy and, while it will be a massive transition, it is doable, it will be affordable and it must be done. In this context, it is significant to observe how quickly Governments, including ours, can act in the face of a global crisis. Why didn't the government think to capitalise on the stimulus package as a way of simultaneously boosting energy efficiency/renewable energy

¹⁴ http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm (accessed 9/09/08)

¹⁵ http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf (accessed 9/09/08)

sectors by requiring citizens to spend that money on energy or water saving appliances, thereby saving individuals an even greater amount of money going forward? By way of example, one of the authors of this paper last year installed a 1kwh PV grid connected solar electric system and her last quarterly account for electricity use was \$6.50 (and that is without any feed in tariff being in place). Her total outlay on the system, net of the Federal rebate, was \$2000. Can you imagine the potential for emissions savings and the economic assistance this would provide to many ordinary families going forward had the stimulus package been tailored in this way? What a win/win situation that could have created.

We wish to emphasize that this submission, along with numerous other located at <http://live.org.au/index.php/political-activities/live-submissions>, has been prepared by a group of extremely concerned private citizens. We are working parents with already huge commitments and responsibilities – such as highly demanding jobs and equally busy family and school lives. We have undertaken the daunting task of researching climate change and compiling our findings and concerns in detail in this and other submissions because, in our view, this is the most critical issue of our time and this process is our only avenue for reaching our Government and being heard. In other words, we have no vested interests, nobody pays or compensates us and there is nothing covert about our access to our democratically elected representatives.

Thank you for your attention to this submission. We would welcome the opportunity to discuss any part of this submission with you.

Yours faithfully

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ANNEXURE - FEASIBLE SOLUTIONS AVAILABLE NOW

To make the necessary rapid transition to a zero emission economy, while absorbing CO₂ out of our atmosphere as quickly as humanly possible, we must immediately undertake a range of policies and measures including the following:

1. Account for and factor into our economy the environmental cost – the true GHG emission toll - of every type of business transaction.

This will require us to implement a robust and fully **transparent costing** of ALL GHG emissions now.

It is contradictory and completely unacceptable for the proposed GHG reporting scheme, to be introduced alongside the Emissions Trading Scheme, to allow any business to hide emissions as 'commercial-in-confidence' or to report a range of emissions, rather than a precise figure. The public has a right to know precisely how much GHG pollution companies/businesses are adding to our atmosphere.

It is also unacceptable for Australia's mandatory facility level reporting to start at 25,000 tonnes when Europe's emissions trading scheme requires reporting from any company facility that has more than 10,000 tonnes of GHG emissions per annum. Given that the GHG debate has been ongoing for decades, mandatory reporting of emissions should not be taking any industry or business by surprise.

2. Phase out all subsidies for fossil fuel based energy and correct the market failures which have fuelled a wasteful, exploitative and unsustainable economy in order to make a transition to a more sustainable and equitable one.

Tax payer funding of climate change must halt now. Currently in Australia total energy and transport subsidies (fossil fuel subsidies) are between \$9.3 billion and \$10.1 billion per annum. Of these, \$9.0 billion to \$9.8 billion support fossil fuel production and consumption, while only \$317 million to \$334 million support renewable energy or energy efficiency. In other words, the support for renewable energy and energy efficiency is a woeful 3.1 to 3.6 per cent of the total level of identified subsidies.¹⁶

Rather than compensating energy intense industries for continuing to pollute, support should be in a form which will directly assist companies to achieve greater energy efficiency and switch to renewable, zero emission energy options.

For example, interest free loans could be provided for companies to enter into partnerships to build decentralised zero emission energy alternatives such as solar thermal plants and wind farms in order to generate industry energy needs. Valuable excess renewable energy generated through such schemes could be fed into the national grid providing a further revenue stream for companies to recoup their investments.

Analysis by progressive economists has shown that our current energy system is grossly inequitable as the increased prices to meet high peak energy demands are built into everyone's standard electricity bills¹⁷. This is part of the reason that home energy users are paying significantly more than the generation costs of 3-4 cents a kilowatt hour from coal (compared to a retail price of 13-15 cents a kilowatt hour) and heavily

¹⁶ Institute for Sustainable Futures report entitled Energy and Transport Subsidies in Australia 2007 Update for Greenpeace Australia Pacific;

¹⁷ Ibid

subsidising energy intense industries (ie large businesses pay 6-9 cents a kilowatt hour and in some cases, such as Alcoa in Victoria, only about 2.5 cents a kilowatt hour, which is below cost of production at the coal plant)¹⁸.

According to a study released in November 2007 by the Washington based Centre for Global Development, Australian power plants are the most polluting in the world, producing more than 11 tonnes of carbon dioxide emissions per person each year. We are far heavier emitters on a per capita basis than the United States which is ranked as the second most polluting country with nine tonnes per person, while China is down the list with only two tonnes per person (including the imbedded carbon from producing most of the products consumed by developed nations). It is unacceptable for a developed country like Australia to have such a poor performance for electricity generation.

We must immediately halt the massive hidden subsidies for urban car transportation and improve public transportation. These subsidies mean that we are not seeing or paying the true cost of car transportation and this drives behaviour and choices which are counter-productive to a lowered emissions environment. In addition to easing worsening traffic congestion experienced by most major Australian cities, replacing private cars by increasing public transport will dramatically reduce GHG emissions. However, if petrol prices are compensated under the CPRS, whilst public transport prices increase due to increased electricity and fuel prices, then a further perverse subsidy supporting an unsustainable practice will be introduced. Funded from monies raised through the CPRS, public transport should be offered free to all Australians below a certain economic threshold and other incentives introduced to encourage greater expansion and use of public transport.

3. Legislate for a national Feed-in Tariff (FIT) mandated at 60¢ per kWh, offered for 15 years, paid on the entire output of a system via gross production metering, paid on all renewable energy systems up to 10kW (and at 48¢/kWh for systems from 10kW-100kW) and paid to anyone who installs renewable energy – households, businesses and community buildings.

FITs have proven extremely successful in accelerating the uptake of renewable energy in more than 40 countries already. FITs offer around four times the market rate, decreasing by 5% a year over 20 years, the idea being to encourage early adopters and give a boost to production levels so that costs will fall rapidly and eventually make the FIT unnecessary¹⁹. Because FITs put a higher value on renewable energy (with zero emissions), a company can expand knowing that the demand for its products is there. Banks will lend on projects because of the secure flow of income. The market still works because consumers shop around for the best and cheapest products so firms have to innovate and compete.

In Germany FITs offer around 80 cents per kwh (recognising that Australia's sunshine is far greater, 60 cents per kwh is suggested here) and put the return on the investment of solar panels up towards 10% and bring the payback time to around a decade²⁰ rather than circa 40 years as in Australia. FITs cost the Government nothing and when spread by electricity companies among all consumers add only a few dollars to the average electricity bill each quarter.

The German solar experience demonstrates that FITs can create jobs and investment while reducing GHG emissions²¹. As a result of its FIT, Germany now boasts over 50% of the world's installed solar power capacity²² and the prices of renewable technologies²³ in Germany are much lower now than elsewhere²³. Last year Germans installed over 700 MW of solar power while Australians installed a pathetic 8 MW.

¹⁸ <http://www.futureenergy.org/infopolluting.html> (accessed 9/09/08)

¹⁹ <http://www.guardian.co.uk/environment/2007/aug/06/climatechange.greenpolitics> (accessed 9/09/08)

²⁰ Ibid

²¹ <http://www.envict.org.au/inform.php?menu=5&submenu=1168&item=1323> (accessed 9/09/08)

²² <http://www.ft.com/cms/s/0/a63bf1f2-5bfe-11dd-9e99-000077b07658.html> (accessed 9/09/08)

²³ Ibid

Further, FITs boost investment in 21st century appropriate, zero emission technologies. With only a fraction of our renewable energy resources, countries such as Denmark, Germany, Austria and Sweden, to name a few, are enjoying the social and economic benefits of a burgeoning, multi-billion dollar renewable energy industry. Currently over 250,000 people are employed in renewable technologies in Germany alone and this figure is expected to double by 2020²⁴. The solar industry alone is worth over \$6.5 billion and employs over 30,000²⁵.

Given that the potential output of solar panels closely matches the peak demand period (which dramatically increases in summer in the southern states due to air conditioner use)²⁶, imagine the prospects FITs could present for Australian farmers currently facing enormous hardships due to the prolonged drought – which scientists have long been predicting that Australia will suffer due to climate change. Instead of handing out drought relief, we should be assisting farmers to become producers of valuable zero emission energy.

Australia is a sunburnt²⁷ and windblown²⁸ country – we should be leading the world with zero emission energy technologies, not slipping further into the quarry.

4. Introduce a simple, fair and transparent carbon pricing mechanism, free of loopholes and distortions, to ensure that ALL GHG emitters pay a high price for their impact on our environment.

Heavy emitting industries have enjoyed a free ride for a very long time. Since GHG pollution has been on the agenda for decades, any industry which has failed to prepare for this cost of doing business should not be in business and certainly should not be supported with taxpayer money.

All pollution should be accounted and charged for at the point of consumption to ensure that imports are subject to the same tax as goods and services produced in Australia. Applying the same tax on imports (including carbon kms), could ultimately assist the domestic market to make a transition to low emission goods and services and value locally made products free of imbedded carbon from travelling long distances.

Meanwhile, the Government must recognise the ramifications of over 75% of Australia's energy needs (and over 90% of Victoria's and NSW's) being generated by coal-fired electricity; everything made in Australia has an enormous carbon footprint. Already much of the developed world is moving rapidly towards a low carbon economy, putting our goods and services at a major disadvantage. Particularly when the imbedded carbon kms are taken into account, due to the distance Australian made goods must travel, it is in our best economic interest to switch to zero emission energy sources to produce our goods as quickly as possible.

With all carbon imbedded in all goods and services taxed equally, the scheme would encourage other countries to enter into carbon pricing schemes as failure to do so will result in their products becoming uncompetitive in an increasingly carbon constrained world.

5. Use proceeds from the CPRS to support a just transition away from polluting practices and to support energy efficiency and renewable energy projects and infrastructure for its distribution.

²⁴ <http://www.guardian.co.uk/environment/2007/aug/06/climatechange.greenpolitics> (accessed 9/09/08)

²⁵ <http://www.envict.org.au/inform.php?menu=5&submenu=1168&item=1323> (accessed 9/09/08)

²⁶ <http://www.ap6.gov.au/assets/documents/ap6internet/Securing%5FAustralias%5FEnergy%5FFuture20061121204111%2Epdf> (accessed 9/09/08)

²⁷ <http://www.theage.com.au/news/climate-watch/redhot-australia-just-the-spot-for-solar-energy-projects/2007/11/28/1196036983561.html> (accessed 9/09/08)

²⁸ <http://www.urbanecology.org.au/topics/windpower.html> (accessed 9/09/08)

Rather than cash outlays as the Government is suggesting, which are highly unlikely to be spent on achieving greater energy efficiency and instead result in another ludicrous baby bonus style rort, Australians should be assisted with practical, energy saving solutions which are available now. Starting with public housing and low income earners first, all homes should be installed with Smart Meters and retrofitted to meet mandatory high energy efficiency standards.

All appliances sold in Australia from now on should be required to meet mandatory high efficiency standards and old energy intense appliances should be replaced. The real cost of an inefficient appliance is not reflected by its price tag but in the energy infrastructure required to operate it. We should not build new coal fired power stations in order to run cheap, inefficient and often unnecessary appliances.

Consider also the carbon quota system promoted by the former UK Minister for the Environment, David Miliband, and influential environmental thinkers such as George Monbiot. This model would allow individuals to emit a limited amount of carbon with any excess commanding a high price. A fair and effective cap is thus placed on each person's emissions and yet would enable low income earners to benefit by being prudent with their emissions and earning a profit from the sale of their unused carbon credits.

Many more and more sustainable jobs will be generated by a transition to a zero emission economy. Instead of compensating the industries responsible for climate change, the revenue raised by the CPRS could provide an ideal fund to support communities, which have relied on polluting industries, to retrain and move into jobs required to meet 21st century demands. As experience in Europe has demonstrated, renewable energy and energy efficiency industries offer more secure and more sustainable jobs. For a multitude of reasons, it would be foolish and irresponsible for us to continue to protect the OLD at the expense of a NEW local economy.

6. Replace our current centralised and wasteful energy system with one that provides incentives to conserve energy and reward energy efficiency, generate energy with zero emission, renewable energy technologies and upgrade our grid to more effectively and efficiently distribute renewable power.

It doesn't make sense to invest any more funds in coal or to consider introducing nuclear energy when viable renewable sources of energy abound and their cost will only decrease over time whilst creating new industries and jobs. What's more, renewables are set to enjoy the position of a *declining-cost* resource - an anomaly among energy resources because the more of it produced, the cheaper it gets. This is in contrast with fossil fuels, where marginal extra supplies start costing more as oil fields or gas reserves are pushed beyond their optimal field recovery rates.

It is now predicted that by 2015 concentrated solar thermal power will be cheaper than coal, that is, if carbon capture and storage (CCS) of deadly plumes of CO₂ ever becomes feasible. Nuclear powered electricity generation plants will require massive funding, will take years to become viable and carry with them unacceptably high health and environmental risks. In addition to large amounts of fresh water, both coal using CCS and nuclear energy generation will require careful management of toxic waste, a serious public liability risk for all governments and their people.

In order to support a transition to zero emission electricity generation, we urgently need to commence an upgrade of the national electricity grid to a distributed model, to replace the central station paradigm which discriminates against renewable energy. According to the World Bank's RE (Renewable Energy) Tool Kit, "grid-connected renewable energy systems promote local economic development, address regional

and local health and environmental concerns, increase energy security and have a high potential to mitigate global climate change.”²⁹

Because our current centralised energy production and distribution system is dependent on maximum energy sales, it encourages consumption and waste through high volume discounts. Analysis by progressive economists has shown that our current energy system is grossly inequitable as the increased prices to meet high peak energy demands are built into everyone’s standard electricity bills³⁰. This is part of the reason that home energy users are paying significantly more than the generation costs of 3-4 cents per kilowatt hour from coal (compared to a retail price of 13-15 cents per kilowatt hour) and heavily subsidising energy intense industries (eg large businesses pay 6-9 cents per kilowatt hour and in some cases, such as Alcoa in Victoria, only about 2.5 cents per kilowatt hour, which is below cost of production at the coal plant)³¹. High energy users need to pay the true cost of the electricity they consume and low users, including householders, need to be provided with appropriate rebates and incentives so that they can make the transition to energy efficiency. We need to move towards a system that provides incentives to conserve energy and reward energy efficiency (such as California’s successful *Flex Your Power* program).

Utility companies need to be made responsible for carbon reduction and financially rewarded for this vitally important role (and penalised for the converse), so that there will be an incentive for them to reduce, rather than increase, the energy consumption of their consumers and commence a rapid transition to renewable energy sources.

7. Redirect investment away from road transportation and towards public transport and rail freight.

We must immediately halt the massive hidden subsidies for unsustainable road transportation. Transport companies should not be able to externalise their business costs by exploiting tax payer funded roads. In addition to being unsafe, ‘road trains’ put enormous pressure on our roads, which are not designed to carry frequent, massive loads. The movement of goods around Australia should be by rail, which can eventually be powered with 100% renewable energy.

We must replace the current system favouring private car transportation with one which improves and encourages public transportation. Hidden subsidies for road transportation mean that we are not seeing or paying the true cost of car transportation and this drives behaviour and choices which are counter-productive to a lowered emissions environment. In addition to easing worsening traffic congestion experienced by most major Australian cities, replacing private cars by increasing public transport will dramatically reduce GHG emissions. However, if petrol prices are compensated under the CPRS, whilst public transport prices increase due to increased electricity and fuel prices, then a further perverse subsidy supporting an unsustainable practice will be introduced. Funded from monies raised through the Future Fund and CPRS, public transport should be offered free to all Australians below a certain economic threshold and other incentives introduced to encourage greater expansion and use of public transport.

Unsustainable road transport should be abandoned in favour of rail which can be powered with renewable energy; a responsible and appropriate response to both climate change and peak oil. The massive social and environmental costs of road transportation for goods and people, whether they are the astronomical cost of maintaining the roads, the escalating congestion of our major cities, or the spiralling GHG emissions resulting from increased private car use, have been ignored for too long in Australia.

²⁹ <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTENERGY/EXTRETOOLKIT/0,,contentMDK:20742834~menuPK:2069918~pagePK:64168445~piPK:64168309~theSitePK:1040428,00.html> (accessed 9/09/08)

³⁰ Ibid

³¹ <http://www.futureenergy.org/infopolluting.html> (accessed 9/09/08)

8. Halt all native forest logging because our forests are our most valuable carbon sinks, water catchments and wildlife habitats³².

All forestry practices in Australia must be considered for the contribution they will make to climate change.

Private companies must not continue profiting from the destruction of Australia's most valuable carbon sinks, water catchments and wildlife habitat for endangered species. According to Professor Brendan Mackey and his team from ANU, one hectare of mature, tall, wet forest can store the equivalent of 5,500 tonnes of carbon dioxide in the trees and soil, while logging operations release most of this carbon back into the atmosphere.

Further to this, reducing GHG emissions and absorbing excess carbon are two different exercises. Native forest logging - unlike plantations – is a massive contributor to GHG emissions. Sir Nicholas Stern found that ending the logging and burning of the world's old growth forests would reduce global greenhouse emissions by more than the combined emissions of all the world's transport systems³³. Just as it makes no sense to steal from Peter to pay Paul, international "carbon credits" from the Kyoto Protocol or any other tree planting scheme should not be used to offset GHG pollution because the maths will never add up to reduced emissions.

9. Recognise the massive impact of methane and carbon from the livestock industry on our spiralling GHG emission toll and commence a rapid scaling down of the breeding and trading of ruminant animals in Australia; the quickest, most efficient means of reducing Australia's GHG emissions now.

First, policy makers must not continue to underestimate the impact of methane to Australia's GHG emission toll by averaging it over 100 years, thus accounting it as only 25 times more potent, per tonne, than carbon dioxide³⁴. The reality is that while mostly dissipated after a decade, and almost entirely gone after 20 years, methane is in fact 72 times more potent when it is in the atmosphere³⁵. Methane does a lot more damage a lot more quickly than is being acknowledged.

Further, livestock industry practices have a high methane and carbon debt because intensively raised animals, either on pasture improved land or factory farming, consume nitrogen enriched fodder which is highly energy intensive to make and the fertilisers used are a source of soil and hydrosphere contamination, GHG emissions, depletion of the ozone layer, acid rain and photochemical smog³⁶. Also, these fertilisers are imbedded with further GHG emissions from international transport.

Globally, another significant contributor to the livestock carbon debt is that the demand for intensively raised animal protein has boosted demand for products such as soy bean to be added to the mix of supplement feed rations. Consequently, large areas of previously forested land have been cleared (causing the loss of CO₂ sequestration potential and biodiversity) for soy bean production which is again intensively fertilised by artificial nitrogenous chemicals. Australia is contributing to this carbon debt by importing huge quantities of these products for our livestock.

³² Judith Ajani *The Forest Wars* (Melbourne University Press 2007)

³³ http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm (accessed 9/09/08)

³⁴ <http://www.theage.com.au/opinion/the-missing-link-in-the-garnaut-report-20080709-3cjh.html?page=-1%23> (accessed 9/09/08)

³⁵ Ibid.

³⁶ <http://www.obihiro.ac.jp/english/icollaboration/oaserd/pdf/2004/2004-01-takahashi.pdf> (accessed 9/09/08)

Australia's environment is exceptionally fragile and has been damaged in a multitude of ways as a result of introducing livestock. These include massive land clearing for animal production which has contributed to 'man-made drought', extinctions of native species (relatively more species in recent times in Australia than on any other continent), land degradation and salination of our soils³⁷. Given that we know that a large portion of Australia's methane emissions come directly from 28 million cattle and 88 million sheep³⁸, we should commence a significant scale down of the number of these animals each farmer can breed and trade based on a true accounting of methane produced per head of livestock. Instead of "drought relief" (that is, money to wait for rain), farmers should be financially supported and rewarded for taking on the vitally important role of drastically cutting methane and carbon emissions from animal production and rehabilitating and revegetating the land.

In light of the known high levels of 'non-energy' GHG emissions from sectors of the agriculture industry and emissions associated with the deforestation of land, it is simply not acceptable that emissions from agriculture and land use, land use change and forestry not be included from the start in the CPRS.

³⁷ Jared Diamond, *Collapse: How Societies Choose to Fail or Survive* (Penguin Group, 2005)

³⁸ <http://www.theage.com.au/opinion/the-missing-link-in-the-garnaut-report-20080709-3cijh.html?page=-1%23>
(accessed 9/09/08)