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Senate Select Committee on Climate Policy
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Submission in response to the Senate Inquiry into the exposure drafts of the legislation to implement the Carbon Pollution Reduction Scheme

INTRODUCTION

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 greenhouse gas (GHG) emissions and commencing a just transition away from them. On the flip side this would also present many new opportunities in cutting edge energy efficiency and renewable energy technologies which offer more secure and sustainable employment in industries stepping up to meet increasing demands for ecologically friendly technologies, products and services (ie auditing, delivering innovative energy efficient systems) in the domestic and export markets. 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 – a net gain in jobs of between 3,900 and 10,700 jobs[1]. 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 region[2].

Instead Australians have been presented with an emissions trading scheme, the Carbon Pollution Reduction Scheme (CPRS) Act 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; amongst the biggest polluters in the world. 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 CPRS[3]. 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 million[4]. What this represents is a massive transfer of public wealth (and fresh air) into the hands of private vested interests who are not accountable to the Australian people.

[1] http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/just-transition-report.pdf
[2] Ibid
[3] http://www.acfonline.org.au/uploads/res/ACF_RET_EITEs_submission_-_Final.pdf
[4] ibid

KEY FAILINGS OF THE PROPOSED CPRS

1. The 5-15% target is too low

Australia is a big player in international emissions. While many arguments have been put forward about our small contribution to the problem, Australia is in the top 10% of nations for total emissions (ranked 19th in 2004 human-based emissions). This is not based on the per capita figure which is even higher relative to other nations.

The proposed CPRS Act will undermine international negotiations to achieve an effective global response to climate change, because we have not adopted strong measures to significantly reduce our own emissions.

If weak targets are adopted universally then emissions will not stabilise atmospheric concentrations of GHG at 450ppm. It would send the world past 550ppm and trigger unstoppable and catastrophic climate change.

Another key problem with setting a weak target is that the only certainty business has is that it will need to be changed again in the future. Business needs long-term investment horizons in order to make multi-billion dollar decisions. A target of 5-15% by 2020 set now is likely to lead to many bad investment decisions being made, as business invests in 'low pollution' infrastructure which, in only a few years, will need to be demolished at further expense and replaced with zero emissions alternatives.

2. There is no emissions cap

Under the Exposure Draft for the CPRS, there will not be a cap on Australian emissions of greenhouse gases. Under this Bill, limitations apply to only the total number of auctioned Australian emissions units, the total number of Australian emissions units given away for free under the emissions-intensive trade-exposed assistance program and the Australian emissions units given away to coal-fired generators under Part 9.

Crucially, it will not limit:

- Australian emissions units provided by the Government at a fixed price (Part 2 s13)
- Australian emissions units created by eligible reforestation projects (Part 10)
- International emissions units traded into the Australian scheme (Part 4)

The number of free units to be issued to EITEs is not capped, nothing in the Exposure Draft that limits the proportion of free permits that can be given away to emissions-intensive trade-exposed industries. Even the 90% give-away proposed in the White Paper may end up being increased. Every free permit given to a polluting company means less money raised through the auction system will be available to compensate householders and invest in much-needed renewable energy development. The companies that have profited from pollution must be made, like everyone else, to pay their way in a carbon constrained world. Under the structure allowed for in this Bill, the 5-15% target will only exist on paper.

3. Assistance to coal generators should be contingent on a phase-out plan.

We must set a timetable for withdrawal from coal power, and encourage companies in coal-power to diversify their energy portfolio and plan for the closure of their coal plants. This can be done in a strategic, fair and orderly fashion if it is explicitly planned. The Government's hesitation to admit and plan for this eventually is irresponsible, since it leave both the country's energy supply, and potential energy

investors suspended in uncertainty. Any assistance provided to coal fired power stations under the CPRS must be contingent on phase-out plans.

> *"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. "*
>
> *"The high emissions intensity of energy use in Australia is mainly the result of our reliance on coal for electricity."*
>
> *- Garnaut Climate Change Review*

The CPRS as it stands is protecting, compensating and rewarding our biggest polluters. The high emissions intensity of energy use in Australia is mainly the result of our reliance on coal for electricity. The CPRS as it stands ideally suits 'important' emission intense industries, which have benefited enormously from Australia's cheap, dirty coal fire electricity, receiving over $3 billion a year in free permits and compensation under the proposed CPRS legislation. It also unfairly transfers the cost of reducing emissions to industries with less lobbying power and to the community at large. Every dollar of compensation that goes to polluters is a dollar less to assist householders and clean industries.

Tax payer money should be directed towards achieving the necessary transition to a more sustainable economy, towards 100% renewable energy sources, capable of protecting our most valuable and irreplaceable public asset; our environment, for current and future generations.

4. Reforestation projects under the CPRS do not exclude logging and can be "offsets" for industrial emissions

The scheme can (and will) be flooded with cheap credits provided for free beyond the cap to people growing forests, who will then be able to harvest those forests for timber unless the Regulations specifically prevent it.

The irreversibility of climate change demands that we be precautionary and that we make every effort available to reduce emissions and draw down atmospheric carbon. All vegetated areas set aside for a carbon sink (thus providing a source of income for the landholder via the CPRS) should not be disturbed by logging or grazing.

5. Voluntary Reductions need to count

The CPRS renders useless voluntary domestic efforts already under way to reduce some of our GHG emissions. The efforts of everyone from householders to State Governments to reduce emissions will ONLY reduce the price pressure on the polluters. This must be fixed by taking account of community action and all the policies already in place when setting the scheme caps, and using the scheme to drive more ambitious efforts.

6. Transparency and review

Section 342 of the Exposure Draft sets out the "reviewable decisions" in a table. This table appears to ensure that most decisions against polluting entities are reviewable, but decisions in favour of them are not. This sets up a systemic bias against the goal of the act: to reduce emissions. Exclusion of third parties from being able to take civil or administrative action for breaches of the CPRS Act or against decisions made under the Act also weaken community input and the national interest

of ensuring the Act is enforced.

Third party prosecutions have made a significant contribution to environmental and social law in Australia, and given the immense importance of this Bill for the future of Australian society, it is vital that third party rights be established under any CPRS Act.

FEASIBLE SOLUTIONS AVAILABLE NOW

An emission trading scheme is just one of the tools the federal government can use to neutralise Australia's greenhouse gas emissions. Other policy tools can include:

- regulating against all new coal infrastructure (mining, power generation, & export)
- a greenhouse gases reporting scheme that is public and applies to every type of business transaction
- a halt to all subsidies for fossil fuel based energy
- a national feed-in tariff
- a simple and transparent carbon pricing mechanism free of loopholes and distortions
- incentives to conserve energy and reward energy efficiency
- zero emissions energy generation from renewable energy sources
- investment in public transport and rail freight
- a "net energy zero" building policy for all new buildings
- a halt to all native forest logging
- a halt to using tree planting schemes to offset greenhouse gas pollution
- rapid scaling down of the breeding and trading of ruminant animals in Australia

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 competition with high emitting industries who stand to be maintained and supported by massive ongoing subsidies and now, through the proposed CPRS Act, compensation. This scenario is untenable and belies the Government's aim of reducing GHG emissions and supporting an effective global response to the climate emergency.

Slow short term changes will achieve nothing. To make the transition to a zero emissions economy, while absorbing C02 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 <u>every</u> 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 48c/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 for workers and communities 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) End the perverse subsidy that is Fringe Benefit Tax concessions for private vehicle transportation which encourages greater fuel consumption and greater vehicle km travelled.
9) Halt all native forest logging because our forests are our most valuable carbon sinks, water catchments and wildlife habitats.
10) Recognise the enormous 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.

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 Review[5] and by Professor Garnaut). 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 determined 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 meetings 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 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

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

and condemn the remaining life on Earth to an existence of unpredictable and ferocious weather patterns, marked by severe shortages of fresh water[6]. 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 benefited from polluting by 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 significant transition, it is achievable, it will be affordable, and it must be done.

Thank you for your attention to this submission.

Yours faithfully
Zoe Rogers

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

ANNEXURE - FEASIBLE SOLUTIONS AVAILABLE NOW

To make the necessary rapid transition to a zero emission economy, while absorbing C02 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 emits 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.[7]

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 bills[8]. 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)

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

[8] Ibid

and heavily subsidising energy intense industries (ie large business pays 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)[9].

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 48c/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 unnecessary[10]. 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 a kwh (recognising that Australia's sunshine is far greater, 60 cents a 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 decade[11] 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.

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[9] http://www.futureenergy.org/infopolluting.html (accessed 9/09/08)

[10] http://www.guardian.co.uk/environment/2007/aug/06/climatechange.greenpolitics (accessed 9/09/08)

[11] Ibid

The German solar experience demonstrates that FITs can create jobs and investment while reducing GHG emissions[12]. As a result of its FIT, Germany now boasts over 50% of the world's installed solar power capacity[13] and the prices of renewable technologies in Germany are much lower now than elsewhere[14]. Last year Germans installed over 700 MW of solar power while Australia installed a pathetic 8 MW.

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 2020[15]. The solar industry alone is worth over $6.5 billion and employs over 30,000[16].

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)[17], 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 sunburnt[18] and windblown[19] 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 tax payer 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

[12] http://www.envict.org.au/inform.php?menu=5&submenu=1168&item=1323 (accessed 9/09/08)
[13] http://www.ft.com/cms/s/0/a63bf1f2-5bfe-11dd-9e99-000077b07658.html (accessed 9/09/08)
[14] Ibid
[15] http://www.guardian.co.uk/environment/2007/aug/06/climatechange.greenpolitics (accessed 9/09/08)
[16] http://www.envict.org.au/inform.php?menu=5&submenu=1168&item=1323 (accessed 9/09/08)
[17] http://www.ap6.gov.au/assets/documents/ap6internet/Securing%5FAustralias%5FEnergy%5FFuture20061121204111%2Epdf (accessed 9/09/08)
[18] 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)
[19] http://www.urbanecology.org.au/topics/windpower.html (accessed 9/09/08)

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.

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 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 a position of *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 carries with it 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."[20]

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 bills[21]. 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 subsidising energy intense industries (ie large business pays 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)[22]. 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.

[20] 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)

[21] Ibid

[22] http://www.futureenergy.org/infopolluting.html (accessed 9/09/08)

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 it be 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.

8. Halt all native forest logging because our forests are our most valuable carbon sinks, water catchments and wildlife habitats[23].

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 GHGes. 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 systems[24]. Just like 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.

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[23] Judith Ajani *The Forest Wars* (Melbourne University Press 2007)

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

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 dioxide[25]. 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 atmosphere[26]. 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 fertilizers used are a source of soil and hydrosphere contamination, GHG emissions, depletion of the ozone layer, acid rain and photochemical smog[27]. 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.

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 soils[28]. Given that we know that a large portion of Australia's methane emissions come directly from 28 million cattle and 88 million sheep[29], 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.

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

[26] Ibid.

[27] http://www.obihiro.ac.jp/english/icollaboration/oaserd/pdf/2004/2004-01-takahashi.pdf (accessed 9/09/08)

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

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