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Mark Andrews

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The Secretary
Senate Select Committee on Climate Policy
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Dear Sir/Madam,

Senate Enquiry into Climate Change Policies

In this letter I make my submission to the Australian Senate Select Committee on Climate Policy and the relevant matters that I discuss are listed in the "Contents" section immediately below.

Contents

This submission has the following contents:

A. Executive Summary

The type of greenhouse gas abatement mechanism that Federal Parliament determines to be right for our country will be critical as to whether or not Australia does its share of the work to help to reduce the dangerous speed of climate change throughout the world. I believe that if the Government's CPRS bill becomes law, then it will, together with the use of an ETS system in other nations in the world, help take the world to 'Hell on a smokestack'. However, Australia could be a leader by using an alternative, effective and fair mechanism for reducing its carbon emissions. Therefore I urge all members of Federal Parliament to oppose the CPRS outright and support an alternative to it -- either my **Green Energy Transition Scheme** or the **Carbon Tax with 100% Dividend Scheme**, both of which are described below.

B. The suitability of an ETS for reducing Australia's carbon pollution

There are four main reasons, in my view, as to why **an ETS is unsuitable** for the reduction of Australia's carbon pollution. It is very unlikely that an ETS will reduce Australian GHG emissions and it is very likely to **increase** them for the following reasons:

(1) The ETSs implemented by Kyoto signatory nations have clearly failed to help reduce total global GHG emissions. In fact they have helped to increase emissions because, for among other reasons, they have helped big polluters to buy permits from other nations when the nation, in which the polluters are based, does not have any more domestic permits for sale. Also, Federal Treasury expects domestic polluters to buy foreign permits under the CPRS, such that total CO2 emissions for Australia will be about 6% above 2000 levels by 2020.[1]

(2) The domestic "cap" on emissions under an ETS is also a "floor". Although the cap equals the total carbon pollution for "covered sectors" allowed by a national government to domestic polluters via permits, before trading with overseas polluters and carbon offsets are taken into account, it is natural for all of the issued permits to be fully employed by polluters. Also, if the price of the traded permits fall, there is less incentive to develop green energy sources.

(3) The ETS "cap" stays in place for years. The Government proposes a five-year life to its first cap under the CPRS to give polluters "certainty". This means that even if future climate science further indicates a dire need for a smaller cap during the period of the cap, the Government would be loathe to reduce the cap because the polluters would require compensation for their subsequent loss of permits.

(4) ETS-sanctioned carbon offsets have been abused and misused ever since the Kyoto Protocol came into action. An emitted tonne of CO2 can be offset by purchasing plantation trees which are meant to 'sink' the emitted CO2 but, very unfortunately, trees can: (1) be cut down; and (2) die of dehydration, malnutrition or disease before they have the chance to mature; destroying the value of the offset. Also the emitted tonne of CO2 that is 'offset' this way may take many years to be biosequestered, thereby exacerbating the danger of humanity and all other species suffering from runaway global warming.

US energy economist, Dr Steven E. Stoft, in his paper, *The Secrets of Cap and Trade*[2], argues that the ETS (Cap-and-Trade) concept is very dangerous – the main reason being that an ETS is not going to help the world reduce greenhouse gas emissions. Most notably, Stoft quotes Dr James Hansen, the world's most eminent climatologist, as saying Cap-and-Trade will "practically guarantee disastrous climate change".

With respect to **social justice** issues, an ETS enshrines the property right to pollute carbon above a certain level for permit holders, which are likely to be only large corporations or federal and state governments, to the exclusion of all others. If enacted, this regime of pollution rights will replace the existing right of all people to pollute GHGs at any level. Australian citizens and residents should not have that right appropriated by governments without their specific consent or, at least, their just compensation. In fact the **Australian constitution requires** that "property" taken by the Commonwealth from private citizens must be done on "**just terms**", i.e. with appropriate compensation (section 51).

Other **social justice reasons** for opposing an ETS include the following:

(a) Professor Ross Garnaut, the Government's prominent economics advisor, has admitted that an ETS, by its very nature, is regressive;

(b) Low and middle income earners will face higher prices leading to greater hardship without compensation; and
(c) An ETS, such as the CPRS, does not provide a plan for a just transition of jobs from high to low carbon industries.

C. The environmental effectiveness of the CPRS and its emission reduction targets

The Government aims to contribute, via its CPRS, a reduction in Australia's GHG emissions of 5% to 15% below our nation's 2000 levels of emissions by 2020. Even if the Government's target of a reduction of 15% were to be achieved (and I do not believe can be achieved via an ETS, as discussed above), it would not help to significantly mitigate the serious threat of dangerous climate change. Rather, it would **reinforce the likelihood** of us suffering from catastrophic climate change because it is too close to "business as usual". A 15% reduction target is inadequate because the most recent climate science shows that we need a much greater level of emissions abatements (i.e. a cut to at least 60% below 1990 levels) to get to a safe climate zone, which is a situation where the chance of runaway global warming is very small. If other nations followed Australia's lead on small emissions cuts, the chances of our Earth avoiding serious climate trouble would be extremely low indeed.

The Intergovernmental Panel on Climate Change (IPCC) in its 2007 Fourth Assessment Report (AR4) said that a 25% to 40% reduction below 1990 levels in emissions by 2020 was what it believed was needed to avoid dangerous climate change.[3] This magnitude of reduction would reduce the chance of exceeding 2 degrees Celsius (2C) above pre-industrial times – a potential threshold for dangerous climate change -- by keeping atmospheric CO2-equivalent levels below 450 parts per million (ppm). Since AR4 was published, the climatological evidence has shown that we are at much greater risk of runaway global warming. Dr James Hansen and other climatologists reported in April 2008 that our planet's atmospheric concentration of CO2 is **already** too high for our environmental safety and Hansen said that a CO2 (equivalent) concentration of about 450 ppm is a "guaranteed disaster" in terms of climate change.[4] Hansen et al said, "If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO2 will need to be reduced from its current 385 ppm to at most 350 ppm, but likely less than that."[5] The real concern is that major positive (vicious) feedbacks to global warming will rapidly warm our planet if climate change mitigation is not sufficient over the next decade, so a very good and robust method of reducing carbon pollution is essential.

The objective evidence shows that the ETS that was implemented (and is still in place) amongst European Union (EU) countries, following the ratification of the Kyoto protocol, failed to achieve the objective of significantly reducing carbon pollution or GHGs.[6] In *EnergyBiz* magazine, Thomas Pyle reported that:

> *"Europe has the largest cap-and-trade system in the world, and instead of leading to a decrease in emissions, Phase I, between 2005 and 2007, led to a 1.9 percent increase in greenhouse-gas emissions."*[7]

Overall, EU nations have helped to increase emissions, in part, because their ETS has helped big polluters to buy: (1) permits from foreign polluters to top up their domestic permits; and (2) carbon offsets. The Government's CPRS does not differ from the EU nation's ETS in its basic structure, so there is no reason for confidence that the CPRS will achieve a better result for our environment.

D. Appropriate mechanisms for a fair and equitable contribution to GHG emission reductions

As can be deduced from what I have said above, the CPRS in not an appropriate mechanism for reducing CO2 emissions, nor is it equitable. However, there are viable and equitable mechanisms for reducing carbon emissions and the two such mechanisms I most favour for reducing emissions in an environmentally effective and equitable way are my **Green Energy Transition Scheme** and the **Carbon Tax with 100% Dividend Scheme**. I describe these mechanisms as follows:

D.1 Green Energy Transition Scheme

I believe the best mechanism for a transition from our mostly carbon-based economy to a green economy is consistent with the following phases:

Phase 1:

(a) The Government legislates dates for the closure of all existing fossil-fuelled power stations, which dates coincide with the commissioning dates of government's commitment to planned green energy power stations.
(b) The development of any further fossil-fuelled power stations is banned, unless they integrate a carbon neutral form of carbon-capture-and-storage (CCS).
(c) Substantial subsidies are given to households and businesses to install green energy systems in homes, commercial and industrial buildings.
(d) Clearing or deforestation of old growth forests is banned immediately.
(e) Ruminant farm animals that belch large quantities of methane are phased out from agricultural production within five years.
(f) All workers in the fossil fuel industries are provided an equitable opportunity to move into employment in green industries, i.e. a "just transition" to green jobs.
(g) All subsidies and tax breaks to fossil fuel-based industries are abolished, except where they are used to make a just transition of employment for workers.

Phase 2:

(a) The Government funds its development of the green energy power stations, which it eventually owns and controls, by creating interest-free loans and by revenue raised from imposing a carbon tax.
(b) The Government levies a carbon tax against fossil fuel supplied into the economy so that, as the completion of the development of green energy infrastructure nears, the price of carbon-polluting energy generation is about the same as that which is charged by the public owned green power stations.
(c) As much as practicable, all lightweight road vehicle production is for (plug-in) electric cars, in readiness for charging by electricity generated by new green energy power stations and/or green power generated in people's homes and workplaces. The production of internal combustion engines is phased out for all road vehicles, except for where viable alternatives are not practical, e.g. emergency and defence services, long distance freight haulage, and primary production purposes.

Phase 3:

(a) After commissioning each of its green energy power stations, the Government charges consumers of the electricity from those stations a rate per kilowatt hour that takes account of: (1) the need to repay the principals of the interest-free loans that were used to fund the development of the stations; (2) how much of the stations' development has been funded by carbon taxes; and (3) the operating costs of generating the electricity from, and maintaining, the stations.
(b) All industrial and domestic combustion of coal and coal exports are banned, except for use by domestic and foreign companies and nations that guarantee and can demonstrate that the coal will be used under an environmentally-sound method of CCS.

Under my proposed Green Energy Transition Scheme, all existing fossil-fuelled power stations would be closed by 2020 and, unless a genuine carbon-capture-and-storage (CCS) technology becomes available that is integrated into any new fossil-fuelled power stations that makes them carbon neutral, no more fossil-fuelled power stations should be developed. To this point, CCS or "clean coal" technology is non-existent because, although *carbon capture* has been proved to be possible, a viable and *large-scale carbon storage* mechanism for coal-fired power stations' CO2 emissions has not yet been created. Also, such carbon storage, if it is ever developed, is very unlikely to be practicable for Australian geological conditions. Thus the Government should legislate to close all existing coal-fired power stations according to a schedule which harmonises with the opening of large-scale green energy infrastructure, such as concentrated solar thermal, wind and wave power stations, and the Government should develop, own and run these green energy power stations.

The capital cost of the Government's green energy power stations should be funded both by interest-free loans from Treasury and by imposing carbon taxes on fossil fuels supplied into the economy. The total value of the interest-free loans that should be used to fund these stations should be determined by subtracting the total revenue expected to be raised by the carbon tax from the capital cost of the stations. The carbon tax should be phased in over all of the years to 2020 to take account of the desirability/need to smoothly increase the price of electricity, in light of the fact that fossil-fuel based power generation, at least for now, is much cheaper than green power generation. Without the carbon tax component of the price of electricity, there would potentially be, in one step, a huge increase in the consumers' cost of power when the fossil-fuelled power stations go off-line and the green power takes over.

I believe that all large-scale green energy infrastructure should be developed, owned and democratically controlled by the public via the Government because all mains electricity supplies should be considered a natural monopoly for ownership by the people because mains electricity is practically a necessity of life for nearly all Australians. The Government should ensure that every citizen, resident or business receives mains electricity at a reasonable cost and that its electricity is generated by environmentally-friendly means.

I believe that large-scale and direct public investment in green energy infrastructure is a much more assured method of achieving the important goal of environmental/climate sustainability than relying on private energy markets to produce an ecologically sustainable outcome. For sure, markets have their place, but I do not believe they should have a primary role in saving our planet from runaway

global warming because relevant and huge green investment is needed now and markets are basically driven by the need for profit, not by the need for ecological sustainability. Because we are now in an unsafe climate zone, we now have a climate emergency. Massive and urgent action is necessary to change the climate path on which we are headed or most, if not all, of humanity will suffer badly. Thus we do not have the time to give sufficient incentive to private energy corporations to make and implement the right investment choices – i.e. choices that will both return our Earth to a safe climate zone quickly and make the energy corporations sufficient profits. Our situation can be likened to being at war with a powerful enemy, which has unexpectedly and quickly dropped many thousands of bombs on our soil and intends to invade -- except that we are the enemy, as well as the injured party! Just as large-scale and urgent action is required to fend off a violent invader, the strong evidence is that we urgently need to get moving to massively reduce our carbon emissions and the quickest way to do that is to resolve to shut down the biggest carbon emitters over the near future and to put green alternatives in their place as soon as practicable. When our nation is at war, we rightly expect the Government to procure and pay for all of the urgent and necessary war materiel. Likewise, in relation to the "war against ourselves", we should fund and control our defence against attack by our enemy, not privatise our war effort.

Neither an ETS system, nor a carbon tax system by itself, can ensure that energy markets 'get it right' as far as our climate is concerned. For example, permits that are traded under an ETS may have too low a market price to encourage green energy infrastructure growth at a sufficient rate; and we just don't know how inelastic demand for carbon-based fuels will be under a 'stand-alone' carbon tax, despite prices rising for fossil fuel as the carbon price rises under the tax. However, with public ownership and control of all large-scale green energy assets of our nation, as I suggest, the Government should be able to get us to the quickest route for sustainability and it should simply charge energy consumers the cost of developing and maintaining these assets, with appropriate price concessions for those people on low incomes.

Under my Green Energy Transition Scheme, we would have: set dates for the phasing out of dirty power generators; public ownership and control of vital utilities; equitable pricing and a green economy. Also, the Government would be able to more easily move us towards a "just transition", involving the transfer of workers' employment in the fossil-fuel-related industries to jobs in green energy industries because government would have much more control over the effective end of the coal, gas and oil industries, as they relate to electricity generation. The Government would also be able to easily and appropriately schedule the necessary green infrastructure commissionings, relative to multiple private corporations doing that.

My suggestion for a carbon emissions abatement scheme does not just involve the stationary energy sector. I suggest that the end of the production of internal combustion engines, except for where viable alternatives are not practical, e.g. emergency and defence services, long distance freight haulage, and primary production purposes, should coincide with the commissioning dates of the Government's planned green energy power stations. As the vast majority of polluting vehicles are phased out, more and more electric cars ('plug-ins') would be powered by green energy from the national electricity grid. Other sectors of the economy would be cleaned up too. Clearing or deforestation of old growth forests should be banned immediately and ruminant farm animals that emit large quantities of methane should be phased out from agricultural production within five years. All subsidies and tax breaks to fossil fuel-based industries would be abolished, except where they used to make a just transition of employment for workers. All Industrial

and domestic combustion of coal and coal exports would be banned, except for use by domestic and foreign companies and nations that can guarantee and demonstrate that the coal will be used under an environmentally-sound method of CCS. All of these changes would cut our emissions down to near total decarbonisation of the economy.

I also suggest that the Government should seek a global agreement to cut carbon emissions to at least 60% below 1990 levels by 2020. Any scheme to unilaterally reduce carbon emissions in Australia by a significant degree would be useless for overcoming our global climate emergency without similar action by the world's other major carbon emitters. However, as a wealthy and high per-capita emitter, Australia should be a leader on how to reduce carbon pollution in an equitable and logical fashion.

D.2 Carbon Tax with 100% Dividend Scheme

I believe that the second best method for a transition from our mostly carbon-based economy to a green economy is the **Carbon Tax with 100% Dividend Scheme**, as advocated by climatologist, Dr James Hansen, economics commentator, Alan Kohler, and features editor of *New Scientist*, Michael Le Page. I opine that this scheme is the best *market-based* mechanism for decarbonising our economy and is consistent with the following steps:

> **Step 1**: Suppliers of fossil fuels into the economy will have to pay a tax for every tonne of carbon in their fuels.
>
> **Step 2**: The quantity and carbon content of fossil fuels extracted or imported will be monitored and audited at the mine gate, well head or shipping terminal.
>
> **Step 3**: The current carbon price, which would be subject to annual revision by an independent carbon authority, will be charged to fossil fuel suppliers according to the amount of carbon entering the economy from them.
>
> **Step 4**: Businesses which can find cheaper ways to reduce their carbon tax liability will do so first. As the carbon price rises from the imposition of the tax, various alternative energy sources to burning fossil fuels will become competitive and economically preferable.
>
> **Step 5**: All revenue raised from the carbon tax will be distributed in equal amounts to every adult member of the population, with a half share for each child, to compensate them for the higher prices of goods and services, which rise because they contain a carbon tax component.

The Carbon Tax with 100% Dividend Scheme has the potential to provide high carbon pollution reductions, social equity, annual price certainty, simplicity and efficiency. Even though the scheme does not cap emissions, the carbon price can be adjusted annually to eventually arrive at the appropriate rate of tax for significantly reducing the economy's use of fossil fuels and give incentives to energy producers to invest in the development of green energy. The 'equal dividend for adults' component of the scheme is provided out of recognition that all adult people have an equal right to pollute the atmosphere with carbon and it compensates adult people in equal amounts for the imposition of the tax, especially if they have been better-than-average at using low cost green energy solutions for their energy needs.

Alan Kohler commented on the Carbon Tax with 100% Dividend Scheme in a June 26, 2008 article called "An Elegant Solution" in *Business Spectator*.[8] I believe Kohler does an excellent job of discussing how the mechanism would work and what are its advantages over Cap-and-Trade/ETS, saying in part of that article:

> *One interesting effect of the uncertainty in commodity and financial markets has been to start switching the weight of intellectual opinion away from emissions trading to a carbon tax regime.*
>
> *A straightforward tax on carbon has the advantage of simplicity and certainty: everyone knows what the price is and it can be set for the optimum balance between environmental and economic impact.*
>
> *But the problem is that governments will get blamed for it, even though it would be a 'good tax', and they would have to do something with the money.*
>
> *On the other hand a cap-and-trade system can result in huge volatility in the end price of carbon, and depending on how the credits are dispensed, profiteering and wastage among companies.*
>
> *Professor James Hansen from Colombia University in New York, one of the leading thinkers on the subject, has come up with an ingenious scheme that deserves examination by Ross Garnaut as part of his project for the Australian government.*
> *Hansen suggests a carbon tax that is immediately recycled in full back to each country's citizens.*
>
> *In a speech to the National Press Club in the US last week (available on his website) he suggested: "Carbon tax on coal, oil and gas is simple, applied at the first point of sale or port of entry. The entire tax must be returned to the public, an equal amount to each adult, a half-share for children.*
>
> *"This dividend can be deposited monthly in an individual's bank account. Carbon tax with 100 per cent dividend is non-regressive. On the contrary, you can bet that low and middle-income people will find ways to limit their carbon tax and come out ahead. Profligate energy users will have to pay for their excesses."*
>
> *The genius in this idea, apart from its simplicity, is that it would cause political opposition to melt away and it would tend to combine the benefits of a tax with the flexibility of the market.*
>
> *Whether the carbon price is created through emissions trading or a carbon tax, there is always going to be huge suspicion among the consumers who have to pay it about who is getting the money and what's being done with it.*
>
> *Billions of dollars are going to be harvested around the world from resentful consumers as they are forced to pay more for things that result in carbon in the atmosphere.*
>
> *Giving the money straight back would not only fix the politics, it would also allow the market to operate. Individuals would obviously try to benefit by cutting their own contribution to the tax and reducing carbon use.*
>
> *That would be far better than governments trying to target the money at*

greenhouse gas reducing subsidies. Bureaucrats and politicians always think they can manipulate the market efficiently, but it always turns out to be a mess.

And it would be better, in my view, than the unpredictable chaos of a cap-and-trade system, where credits are either given away or auctioned, and then traded. As various experiments have shown it is almost impossible to control the end carbon price and the windfall gain from auctioning the credits is likely to be wasted.

All the best,

Mark Andrews

P.S. A copy of this letter has been sent by email today (7th April 2009).

E. References

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