Kevin Rudd
Prime Minister
Parliament House
Australia
20 March 2008
cc. Penny Wong, Peter Garret

Dear Mr. Prime Minister,

I am writing to urge you and your government to reconsider your position and intentions with respect to the Carbon Pollution Reduction Scheme, for which legislation is soon to be presented to the Australian Parliament. I set forth a range of reasons as to why the legislation should be delayed, reconsidered and redeveloped. I have provided alternatives that I contend would serve much better to counter the very real and immediate threat posed by climate change.

Reasons to reconsider the CPRS

1. The trends in climate altering gases are well demonstrated within the Keeling Curve (Figures 1 and 2) (the trends in this curve have until recently been quite similar for Methane and Nitrous Oxide). The legislation to be presented to the Australian Parliament will have such a miniscule effect upon the Keeling Curve as to render the legislation pointless. To illustrate; Australia, from emissions released over our own soil, produces approximately 1.2% of the global anthropogenic CO_2 emissions. Based on the likely case cap proposed, (reducing this emission by 5%) a total reduction in greenhouse gasses of 0.06% globally per annum, if this target was reached, would be realized. This reduction will be inundated by CO_2 emissions many orders of magnitude greater by "developing countries" and developed countries which will almost certainly refuse to sacrifice economic development/recovery and social order for the sake of an intelligent climate change response, let alone reach the still inadequate 15% target their cooperation would trigger in the legislation.

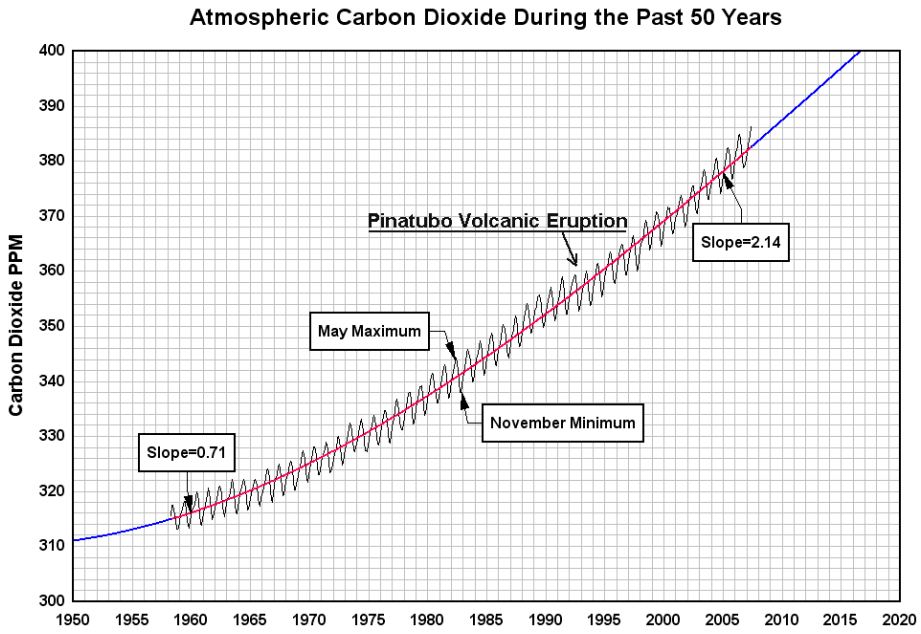

Figure 1: Atmospheric Carbon Dioxide during the past 50 years.

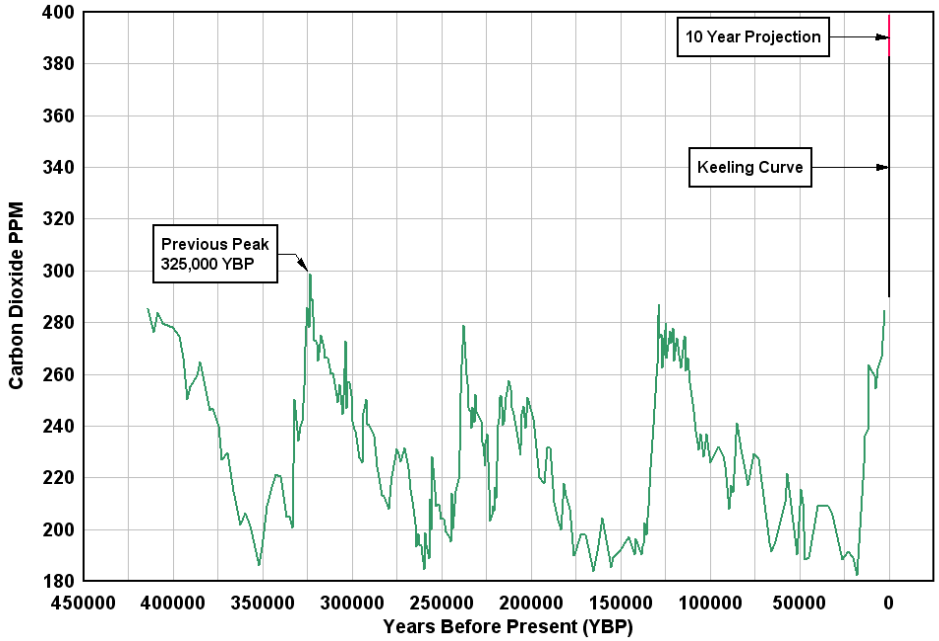

Figure 2: Historic Levels of Atmospheric Carbon Dioxide showing Keeling Curve

The amplitude (annual range in rise and fall per annual cycle) of the Keeling Curve has increased from a net annualized increase of around 1.1 ppm per annum after the industrial revolution to around 3 ppm per annum in recent times, which resolves into a steepening of the averaged curve. The net annual increase in CO_2 and other major greenhouse gas emissions has continued to increase irrespective of the emergence of widely accepted climate science, the Kyoto Protocol, the findings of the IPCC and the emissions trading schemes in various more proactive nations.

The measures proposed in the CPRS legislation do not adequately address the cause of this increase in atmospheric CO_2 and will have a negligible impact on the problem. Additionally, the resources and focus put into these inadequate measures will detract from initiatives which might add value (discussed further in recommended initiatives).

2. There is authoritative science which supports the view that the positive feedback mechanisms will be triggered by a warming planet. These include:

    - Increased methane gas liberated from lakes and other areas affected by the melting of permafrost

    - Increased water temperature in polar regions and reduced reflectivity leading to less artic ocean CO_2 uptake

    - Reduction of carbon capture by reefbuilders and shell forming organisms through temperature, water level and acidity rises in the ocean

- Increased CO_2 and methane liberated from land categories which will change with the climate change, deforestation and desertification in many locations

Although there is substantial evidence that there are countervailing negative feedback effects and that the earth may be entering a modest and brief (30 year) period of cyclic cooling due to planetary orientation/solar radiation effects, it is expected that in ***net terms***, the non anthropogenic inputs from positive feedback will be so substantial it will be ***greater*** than the anthropogenic inputs of greenhouse emissions.

This means that the resultant influence of the proposed legislation by the Australian Government will be approximately 0.03 of one percent of the net total greenhouse gas emissions from anthropogenic and net feedback sources. This also means that the Keeling Curve will become steeper due to positive feedback inputs and the methane curve, which has been flattening (Figure 3), may begin to rise steeply, further contributing to climate change

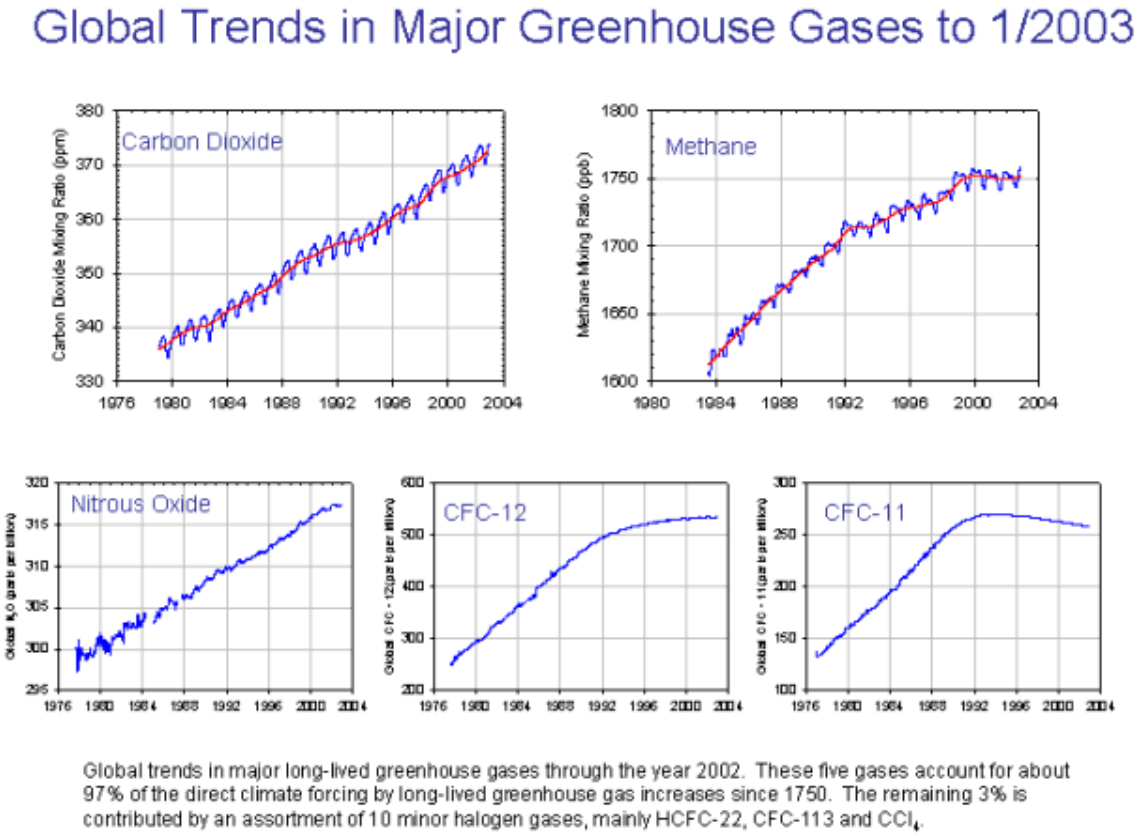

Figure 3: Global Trends in Major Greenhouse Gases

3. It is an inaccurate reflection of our greenhouse gas contribution that Australia can make minuscule efforts towards the reduction of $C0_2$ and other greenhouse emissions by only recognizing in legislation emissions liberated over Australian soil/waters whilst a total of 1.1% of all greenhouse emissions world wide come from the burning of coal shipped from Australia as an export product and burnt, sometimes in low efficiency coal fired power plants. This assumes products that we export which create atmospheric carbon are in no way the accountability of the Australian people. By the time our trade partners

burn all of the fossil fuels exported from Australian land and waters, it would at least double this nation's greenhouse footprint (to around 3% of world greenhouse gasses). If you conservatively assume our real climate change footprint is double the amount actually liberated over Austrian soil, the target of 5% reduction is really a 2.5% reduction against our nation's real contribution to greenhouse emissions.

4. The exclusion of some emitters, and "compensation" of others or institution of "free permits" because they are "trade exposed" means that a reduced group of emitters must make more cuts to emissions or more likely buy cheap "credits" for off shore emission reduction or avoidance outcomes (which should occur anyway and are of dubious long term sequestration value) to meet the target, small as it is.

   Apart from the issues of equity, the scheme is confusing and is enacted in the form of a market mechanism. Market mechanisms like those being promoted in the CPRS have failed elsewhere to reflect the true cost/risk of greenhouse emissions, and are and have been subject to rorting and manipulation by those expert at such use of market mechanisms. One could argue quite reasonably that market mechanisms contributed very substantially to the onset of the global financial crisis through the disengagement between what is real and measurable and what is inferred and perceived in terms of the valuation of many items traded. This proposal places one of the most important public policy issues in a generation directly into a failed and doomed vehicle. Also, because these permits can be traded with developing nations who will allegedly be "sequestering" carbon by not deforesting, the net effect is that in terms of drivers for reducing CO_2 generated by Australia, there simply aren't any. Emitters, if they can buy credits/permits cheaply enough, will simply carry on with business as usual. The market mechanism approach simply does not create the clear incentives and the clear penalties necessary.

   Hence the mechanism will enshrine the pollution through permits which, when some are not consumed, are sold to those that wish to pollute more. Those people of good intent in investing in greenhouse gas emissions outcomes will be merely co-opted into justifying the behaviours of the polluters which need to change the most. This does not drive the decarbonisation of the economy, but instead merely facilitates slight reduction in CO_2 emissions to an arbitrary target, which can be "offshored" anyway because of their tradability. These targets do not in any way approach those which are indicated unambiguously by the world's leading scientists and acknowledged experts on the subject. The reason such a mechanism has been selected is because it is seen to be a compromise position appeasing those with vested interests who own fossil fuel assets and profit from their conversion to energy at home and abroad and are able to make sophisticated use of such mechanisms and exercise significant influence over government and policy.

5. There is a clear and direct correlation between energy consumption, greenhouse footprint and quality if life. It is true that many of the western nations have taken this to an extraordinary level and for the wealthy energy use is well beyond the needs of security and comfort, but the fact remains that in general terms and up to the point where people have their basic needs met, greenhouse emissions must increase with improved standard of living and

quality of life for billions of human beings. This means quite simply that the majority of humanity will not trade their own and their children's welfare and opportunities for an intelligent climate response as this issue will not have the immediacy and clear linkage of cause and effect in their minds to compete with daily survival, security or what are considered basic needs. Governments will be caught between a choice of responsible climate policy versus the loss of electoral support and a risk of social instability. Naturally enough appeasement via short term expediencies and ineffective compromises which respond to the problem only to the degree of language and carefully crafted statements of intent is an obvious avenue. This legislation positions Australia firmly on the sidelines until all major emitters show leadership when it is leadership which is some time away and will be too late.

6. The legislation is unpopular with virtually everyone for their various reasons and hence will be in net terms divisive and unsatisfactory policy outcome for the Australian People and all to no real material effect. This is unfortunate because the ALP's original policy platform of signing the Kyoto Protocol (flawed as is) and commencing robust initiatives/target setting in response to climate change had broad electoral support. I commend the current government for trying to do something rather than doing nothing, which was the policy objective and outcome of the Coalition predecessors and this deserves acknowledgement. Unfortunately if one did nothing, one would achieve statistically similar outcomes in terms of meaningful impact on climate change to what is proposed in the legislation.

7. The terms (duration and provisional target maximum of 15%) of this arrangement is a major concern and another reason the current legislation should be reconsidered urgently. Climate science and sequestration science is dynamic and emerging rapidly and strongly and will continue to provide new insights and significant understandings of the paradigm which will have major public policy implications. The effects of climate change are already measurable but the one thing that is certain is that it will not behave according to any model prediction but will manifest itself in unexpected ways and to unexpected degrees whether this is above or below the conservative models which have informed your legislation. The proposed legislation locks Australia into a mechanism, target and process which will be quite irrelevant by the end of the first term of the current Government and, when amended (as with tax law), will only become more convoluted and disengaged from reality, as the various scientific and electoral motivators grow, and the various compromises and negotiated amendments increase. An approach which provides more flexibility for a greater range of action in response to more information and trends would be simple prudence in responding to risk and the unforeseen.

Alternatives Proposal

The human community and its governments are in a very tough situation. This is a classic case of the 'Tragedy of the Commons", whereby a shared resource or waste deposition option (in this case the atmosphere) is destroyed because the accountability to act is spread through a vast array of players, each with a much stronger individual

interest in impact generating behaviours (each individually innocuous but collectively catastrophic), than to their collective interests to mitigate their impacts.

Because the term of this issue extends far outside the political and planning horizons humans have been able to evolve to this point, our mechanisms of leadership are inadequate in responding to the task. If we think playing the “We will if/when you will” game with other nations will work, there is no hope for Australia to have a meaningful or leadership role in the global Climate Change response. The legislation proposed is that of followers in a landscape when leadership is desperately needed and all leaders are and will continue to be heavily preoccupied with short term drivers.

Humans have also been seduced in recent years by four beliefs which cloud the thinking on climate change and support ineffective responses, apathy, delay and cynicism on the subject. These are:

1) That local action can fix global problems. This has proved true in some cases, but unfortunately this alluring concept is useless with respect to climate change. Consequently much human endevour and good intent will be consumed by initiatives which are both too small and too slow to be of any consequence whatsoever.

2) Another seductive myth is that the market will respond, once it is in the markets interest, with innovation and investment to protect its investments. The market is a beast capable of policy and action only over a relatively short time horizon, just like humanity, and the market will destroy itself if it is allowed to go unregulated because it’s capable only of responding to short term interests, as I think should be well apparent to all by now.

3) Some hope that peak oil will drive a solution via commercial and economic motivations if not for “environmental” reasons. Coal seam gas and coal oil conversion, oil shale and sands, biofuels and many other fuel replacements will mean that the level of energy greenhouse emissions need not fall due to peak oil. More than likely peak oil will create both a greater dependence on coal and sufficient conflict and turmoil that climate change will seem very remote and esoteric problem indeed. The owners of these energy resource “assets” and production processes will certainly forestall the collapse of the carbon economy until the ecosystems which support our community and well being change for the worse to a very serious degree.

4) Those who own the carbon based energy mining, generation, transition and utilization assets and technologies, like tobacco companies, have a strong interest in sponsoring doubt as to the true risks associated with their products. As has been demonstrated in many studies in many industries which profit from damaging products, these vested interests need only create a very small amount of doubt as to the truth or scale of consequence of their activity to create a disproportionately large amount of policy and public paralysis. They also know that even through 99% of acknowledged expert opinion on a matter or any facet of a matter may be against them, they can demand 50% of the debate for a contrarian point of view about any aspect of the debate. This maintenance of doubt and utilization of fear of consequences resulting from

"too strong" a response to climate change has and will continue to unduly influence and indeed cripple public policy on the matter.

Australia is only capable of providing a gesture and presenting a new and meaningful approach to the world on this matter. But it should be an important gesture and set a direction that has a strong potential to lead to solutions. Australia alone cannot have a meaningful impact on the Keeling Curve due to the reasons outlined above but it can have a very meaningful role in the debate and discussion of responses which might contribute to a solution and support and demonstrate the pathways to these solutions. The proposed CPRS legislation will absolutely not achieve this and hence what influence we might have had will be squandered.

I contend there are initiatives which can have a meaningful impact on the problem and not destabilize our economy to the extent that the transition away from the carbon economy has a negative impact on the vast majority of the people of Australia or their economy. There may be a negative consequence for some sectors, many of whom are multinational and predominantly owned by wealthy foreigners (and it must be said, local superannuants). It is up to you to decide who you are governing for, the vast majority of Australians now and into the future, or a select few with a great deal of influence.

The following alternatives could of course be improved with greater reference to the latest scientific, technological and economic knowledge but they are first and foremost about putting real knowledge at the forefront and keeping it there such that it is robust knowledge which informs debate and ultimately shapes policy rather than insidious influences and lobbying processes conducted out of the gaze of full public scrutiny. Such a focus on robust knowledge could occur if we had an organisation that was free of undue and improper influence in order to put vested interest and political point scoring issues aside and focus on the technical, policy and greatest value for money return for investment central to a climate change response.

I propose that legislation is drafted which encapsulates one or all of the following strategies:

1. To respond to Climate Change, substantial diplomatic, scientific, intellectual, industrial and financial resources need to gathered and applied efficiently. These resources will certainly not be developed and applied by an "invisible hand" guiding market mechanisms. Nor would such a mechanism create the clear incentives and penalties/rents which are often the direct drivers of the economic nature of individuals and collectives (certainly in the current economic structure).

   The first initiative is a simple and straightforward tax on all greenhouse emissions by the unit of one tonne of carbon or its modeled equivalent for other greenhouse gasses (the term "permit" could be used if this is more electorally palatable but it's not tradable and it is universally applied and collected without exception). This tax would apply to every person, institution, company, church, organisation, enterprise, farm or government agency. The tax would be collected at the point of distribution of the energy or fuel (point of sale or wholesale whichever is most efficient), or the department which gives permission to conduct any activity/landuse which generates greenhouse gasses (landfill, clearing land, grazing, emissions, animal husbandry etc). How

much to tax per unit would be the key question.. Norway currently taxes anyone who wants to emit a tonne of carbon dioxide at around $50 and this is more expensive that mitigation activities in many instances, hence there is a clear incentive to mitigate up to that cost per unit. I would suggest that Australia taxes every tonne of carbon and (greenhouse gas equivalent unit) say at $20 (refer to point 2 below for context) but that this amount is increased annually and automatically by 10% each and every year. Many people will say it is inadequate but it is suggested in order to create something the various stakeholders might accept with a fairly steep increase to continuously improve performance.

This will give the nation time to adapt, model, project, adjust and innovate as the cost of emissions increases. The 10% compounding annual increase is permanent and as the increase compounds it will drive Australia towards either the no emission utilization of fossil fuels (for example those promising clean coal will have to come up with the technology or pay a rapidly escalating tax), or the development of alternatives at a pace the economy and the innovative capacity of the nation can sustain. There would be no free permits, no compensation and no exceptions. If the nation wishes to compensate the poor, the disadvantaged or the "trade exposed" (that is: those who own a lot of carbon based assets and fossil fuel utilization technologies) this activity can be undertaken at any time as part of national policy irrespective of the carbon tax and in no way linked or geared to it.

2. A very important aspect to this tax would apply, in an identical fashion, to every single export product, which could be used by any party to which the product is on sold, to generate atmospheric carbon or other greenhouse gases. Gas, oil, coal, wood, livestock or any products which will generate carbon dioxide, methane or nitrous oxide would be taxed, on leaving our shores, at exactly the same rate as if it were burned, emitted, or consumed through its productive life on shore unless the exporter can certify that the zero emission technologies will be in use. Australian's world then be taking stewardship of their greenhouse gasses, wherever they happen to be liberated. If fossil fuel exporting companies complain that such a tax would make their businesses unviable, the tax could be imposed only to the dollar level above the market value of their product as of the current date. In that way if and as the price of their commodity rebounds the tax will be imposed up to the full amount as this occurs. It could not be argued that the tax threatened the businesses as they are functioning at current prices and the taxes would commence on increases from current prices. This price setting would need to relate to the current low benchmark in commodity prices to make the system function as intended.

   This tax will generate funds but it will also drive initiative and innovation as never before, because people and organisations will want to avoid paying it. It will also, and very importantly, reward businesses and individuals who have been doing good work already to lower their emissions. The focus of this revenue raised should be both seen to be and in reality managed in response to one simple question **"What is the most intelligent and cost effective way to try to minimise the impacts of climate change for Australia?"** And it must be understood that the answers to this question can and will change as time passes and knowledge increases.

3. Given Australia has so little control of the emissions of 97% of global emissions I propose the following list of application of funds raised through the tax outlined above, which include each of knowledge, action and influence:

    a. Establish an independent peak body to oversee the management and allocation of all funds realized from the tax with representation primarily from acknowledged experts in climate change science, energy efficiency and emerging energy technology, sequestration technology, climate change response policy, economic transition and project and process management, efficiency and accountability. This would be the peak body in Australia and provide the information which guides and develops national policy and interfaces internationally to ascertain best practice.

    It's mandate and terms of reference would limit political interference, remain open to scrutiny and insist that its outcomes are measurable in the most objective ways, such as greenhouse gases mitigated, removed or avoided, knowledge gained and transmitted, international change realized via diplomatic influence. Support of this aspect would be capped at 5% of total tax revenue.

    b. Direct support for institutions, scientists and programs to place Australia as the acknowledged leader in climate science, modeling and climate change response knowledge. Obviously the CSIRO could have this branch of its organisation dramatically expanded but also support for climate science related science could be targeted at any group globally which had the greatest potential to provide valuable outcomes. An annual report on all knowledge, action and influence outcomes and strategies would be produced and publicly available. Support of this aspect would be capped at 5% of total tax revenue.

    c. Direct and substantial support for science, investigations, trials and innovations which actively remove $C0_2$ from the atmosphere or very large point sources and achieve the permanent sequestration of the $C0_2$. The reality is that the Keeling Curve is going to rise steeper and faster even with substantial cuts to anthropogenic $C0_2$ and these cuts are not likely to occur anywhere near soon enough, nor be deep enough to result in meaningful reductions. For this reason, a big part of the solution must be an urgent and broadly deployed focus on developing a process, at a meaningful unit cost and energy use level, to capture and sequester carbon currently in the atmosphere into the ocean, underground, in soils or wherever this can be effectively and realistically achieved. This is ***the only*** way very severe climate change impacts can be avoided. Irrespective of how difficult or unlikely the solution may appear to be now, it warrants massive investment and collaboration in investigation, trials and development on an unprecedented scale. The market mechanism approach will simply not generate the level of innovation, investment or collaboration required to achieve this outcome. This aspect would be capped at 30% of the tax revenue.

d. Direct and substantial funding prioritised on the advice of the peak body for new emission reduction technologies and innovations which will either remove or dramatically reduce greenhouse gasses emissions based on what investments will give the best potential returns in terms of greenhouse gas emissions avoided/reduced. This program would be capped at 20% of tax revenue.

e. Subsidy of existing and available zero or reduced greenhouse emissions technologies and energy delivery processes such that those adopting these technologies will have a very clear commercial or consumer incentive. An example of this would be that anyone generating energy at any level and inputting it into the main electrical grids would be remunerated at 120% of the peak tariff for all contributions of zero emissions energy. These payments would be subsidized by those purchasing carbon dioxide generating energy. Industries which receive subsidized power from government owned facilities will have their subsidies reduced and ultimately entirely withdrawn over a 5 year timeframe, with the only subsidies available being for the producers of no/low emissions power. This program would be capped at 20% of tax revenue.

f. Seed capital and ongoing direct funding would be provided for a new car manufacturing company which exclusively imports, modifies, converts and manufactures hybrid, electric or other low/no emissions cars and busses. This company would always be 51% government owned and have a mandate to source or produce affordable small cars and busses using the best available technologies. Until such time as these cars and busses can be generated on shore this company will be an importer of all brands and varieties of low emissions cars and busses. High emission car/bus purchasers and owners will subsidies low emissions car/bus owners and purchasers such that on a sliding scale and based on comparable usage footprint estimates, the low emissions cars will attract up to a 50% subsidy from government on both the purchase price and registration whereas the higher emission vehicles will attract a up to a 50% additional tax penalty on purchase cost and registration. This program would be capped at 10% of tax revenue.

   There are a great number of other investments to which funds could be put but what is presented above covers the investments in knowledge, innovation, trails and development of new technologies and subsidy and incentives for existing preferred technologies.

g. The final initiative is by no means the least important involving investment in preparation for a climate changed world. the world's community is largely in denial of and unprepared for the fact that climate change is occurring and will occur up to at least the upper bounds of the conservative models and that if anything projections of temperature, sea level and ocean acidity rises will get worse as will the realities of greater predominance of fire, violent storms, desertification, changes to the natural and social water balance across regions and significant issues with regional conflict and the displacement of very

large numbers of humans as refugees. These things will happen. Unless all Australians are planning to relocate, investment in infrastructure, emergency response capabilities and changes to planning and development processes should be developed and undertaken now. Additionally, investment and resources should be harbored to respond to the unforeseen and as a greater capacity is needed to provide relief and support to less wealthy nations. Of all of the investment strategies proposed above this will be the least popular, but could save the most suffering of our compatriots in the longer term, if no solution to the greenhouse issue is found through innovation and collaboration. This problem will not be solved entirely even if all nations cut emissions significantly by 2050, which is unlikely. Even if they did this diligently it is likely it is too late and the planet will find a new equilibrium through positive feedback for many generations to come. We would be investing in preparation for this. This would be capped at 10% of tax revenue.

4. This aspect considers Life of Organisation greenhouse footprint reporting. The current format of having organisations report their emissions is inadequate to determine an accurate understanding of where the focus of effort needs to be directed. Fifty percent of all CO_2 and even more of the methane emitted since the industrial revolution is still in the atmosphere. Life or organisation reporting would be a requirement placed on all organisations to calculate, to an agreed level of accuracy via easy to use tools but not to the degree that it is any real impost on organisations, their life of organisation greenhouse gas footprint. In addition to the life of the organisation to date, a 50 year projection, based on current and fully financed emission reduction initiatives would be estimated. That way all of the greenhouse gasses ever emitted by that organisation, including all of those which were its corporate predecessor's, mergers and acquisitions etc would be estimated as to what their residual footprint of greenhouse gas is and what is projected. This information would then be made publicly available for at least the top 1000 emitters. Naturally if an organisation sequestered carbon from the atmosphere effectively it could remove this amount from the total greenhouse gas inventory it is responsible for in the atmosphere which it updated and reported each year.

5. This aspect is related to the Australian International Interpretation and Diplomacy Initiative. As discussed, Australia cannot control 97% of the greenhouse emissions on earth. This is why there should be a significant investment in the interpretation of knowledge about climate change and its potential impacts to the Australian community and to the international community. Every Australian consulate or diplomatic mission should have senior representatives focused on climate change and how to support and encourage our international neighbours to respond to climate change effectively.

Of course the other logical initiatives are to promote and support population control in Australia and worldwide (Australians population is growing at its fastest rate in 40 years and the world population is set to double through the course of a little more than a generation) and to create a new economic paradigm that is not welded to a need for

2-6% growth year in and year out but actually tries to shrink economies whilst increasing the well being of the citizens. However, such an initiative would likely be ignored as it does not fit the current mindset of most of those who lead for this reason I have not expanded beyond this mere mention.

Australia's emissions, though not insignificant, are comparatively small to the rest of the world. Australia's real opportunity is through creating an example which generates the trajectory, culture and opportunities through which the behavioural, economic and innovation outcomes can be generated and applied by other nations.

This is a historic opportunity to lead. The suffering, loss, extinctions, conflict and irreparable damage which are the inevitable consequence of climate change are difficult to imagine but I urge you to try to imagine the depth and breadth of the perils currently faced. You have seen the kind of untellable suffering a single event such as the Victorian bushfire tragedy can wreak. It is barely a foretaste.

The welfare of billions of human beings in generations now being born and those that will follow and animals and plants of every kind beyond our capacity to imagine, rests in the hands of the leaders of today as they have never done before. Divergence from the political formulas of appeasement, rhetoric and compromises which are completely insubstantial are difficult to avoid in this current manifestation of humanity, but they cannot be afforded.

We need sound and responsible leadership cognizant of the long term realities. Part of this involves educating Australian and others abut the true risks of climate change so they will support pro active policy. It's not an easy task, nor one for which you are likely to be thanked or appreciated for, but it is of desperate importance.

Sincere regards,

Rory Haymont

Recommended Reading:

I recommend the following books for further information and insight into this issue. Of course there is "The Weathermakers", "Heat", and "Scorcher" but of most recent interest I strongly recommend:

- Fixing Climate – Wallace Broecker and Robert Kunzig
- Forecast – Stephen Faris
- Coral – Steve Jones

These books are part of a leading edge of climate science and consequence interpretation.