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Submissions
Garnaut Climate Change Review
Level 2, 1 Treasury Place
Melbourne VIC 3002

Via email - contactus@garnautreview.org.au.

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WA SEA Garnaut Climate Change Review submission

Dear Professor Garnaut

The Western Australian Sustainable Energy Association Inc (WA SEA) is the peak body for the sustainable energy industry in WA.

WA SEA is a business chamber that promotes the development and adoption of sustainable energy technologies and services that minimise the use of energy through sustainable energy practices and maximise the use of energy from sustainable sources. WA SEA has a strong reputation in Western Australia for authoritative commentary on a broad range of issues around energy efficiency and sustainable energy.

WA SEA is supported by a rapidly growing membership of 150 industry members from a diversity of businesses including many of the key energy players in Western Australia. This range of companies, businesses, organisations and individuals are involved in sustainable energy practices and including energy efficiency across government, business and the community in: infrastructure; architecture and design of buildings and homes; transport; performance of appliances, vehicles, machinery, and industrial processes; use of renewable energy generation including passive use and solar hot water.

WA SEA has been working diligently to support the sustainable energy industry in Western Australia and is a respected commentator on issues relating to building efficiency, vehicle efficiency, renewable energy, emissions trading, as well as climate change and much more. Further information about our activities (including our submissions and Media Releases) can be found on WA SEA's website: www.wasea.com.au.

WA SEA Corporate members



WA SEA is working to provide a substantive comment on the general terms of reference at a later date, but has included general comments here about transport and urban planning, and also specifically on Issues Paper 1 - Climate Change: Land use - Agriculture and forestry, primarily addressing the question of opportunities.

Climate change

A succession of reports from the Intergovernmental Panel on Climate Change (IPCC), the most recent in December 2007, describe increased certainty of dangerous climate change and underscore the need for an increased urgency for action on global warming created by human activity.

Climate change induced by global warming will change the distribution and abundance of a huge range of species, and impact on agriculture, forestry, tourism and a raft of other economic activities that contribute to the welfare of Australian communities.

The IPCC will have been in operation for twenty years this year (2008); the United Nations Framework Convention on Climate Change (UNFCCC) treaty from the UN Earth Summit held in Rio de Janeiro in 1992 signalled we needed to put a price on carbon fifteen years ago; the Kyoto Protocol set mandatory emission limits to establish a mechanism for the pricing of carbon ten years ago.

The warnings from the IPCC and the science community get more urgent each year not because of hysteria or conspiracy, but because every year for the last two decades we have failed to act on the warnings and the problem only continues to get worse.

The biggest danger arising from the ongoing work on the science of climate change is not 'pessimism' but the reverse - science is inherently conservative. It is likely future forecasts of climate impacts will be greater, not smaller, just as has occurred in the last six years. If interim targets on emissions reductions are set conservatively now, Australia will commit to creating measures that are simply too small to be effective in the medium term.

Thus, if the recommendations of the Garnaut Climate Change Review only identifies a minimalist target for Australia, we can expect with certainty the need for an even higher target to quickly follow. If this occurs, Australia will be implementing inadequate initiatives that will simply not solve the problem. And that will not be good for a market-based solution – it will create future turbulence in the market and will, with certainty, end up costing us more.

All Australian Governments must be decisive, taking immediate action to ensure we start building all new electricity generation from renewable sources today, while upgrading current inefficient plant with lower emissions generation and exploring cogeneration opportunities. Simultaneously, Australia must ramp up the work to deliver improved efficiency of energy use, and lower greenhouse gas emissions, across all sectors of industry and the community.

General Comments

Export exposed industries

Western Australia is well positioned to make a significant contribution in reducing the greenhouse intensity of Australia's economy through sustainable energy use in Western Australia's resources sector. With the advantage that substantial energy generation in Western Australia is already built

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around gas, efforts to ensure that future expansion of the resource sector around a mix of our world quality renewable resources of wind, solar, wave, geothermal, and all forms of biofuels, combined with other proven low emissions technology, will benefit Western Australian industry, and the Australian economy, once national and international carbon trading starts in earnest. In this sense, so-called trade exposed export industries must not be sheltered, but rather supported in the inclusion of sustainable energy practices in their operations. Such an outcome must be supported through investment by Australia as a nation.

Thus, the best way to support trade exposed industries in the long term is by taking immediate steps now to ensure they are less carbon exposed in their energy sources, including making use of renewable energy sources. This will provide a direct competitive advantage for Australian industry as a whole into the future as internalised carbon costs naturally become a part of the global trading market.

In the short term, trade exposed industries can be given time to adapt by all Australian Governments taking a heavier load of a shared state target. Australian Governments must ensure that all government and government-owned operations move to 100% renewable energy as soon as possible – including all elements of water services, and in transport systems, for the entire government owned transport fleet including the rail and bus fleet.

Transport and planning

Governments must put frameworks in place that take an integrated approach to develop significant, forward-thinking initiatives on sustainable energy. A sustainable way to fight inflation is deliver energy efficiency in all things - including our homes and for our vehicles - that result in long term energy savings and reduce inflationary pressures from rising energy prices that would otherwise impact on the CPI.

And in the early start up phase over the next few years, all Australian Governments must aim to put government operations, including community service provision, in the most efficient buildings, either through upgrading existing accommodation or moving to new buildings and then use renewable energy. For example, this must include all water supplies - not just desalination plants, but groundwater extraction, and water and wastewater treatment as well. Governments must also announce immediate improvements to fleet procurement standards to ensure governments are buying and using only the most efficient vehicles And all government procurement programs must be costed to include not just carbon neutrality, but to be carbon negative – taking a bigger share of cutting Australia’s greenhouse gas emissions.

Our governments must commit to ensure new buildings built on the public purse are energy efficient buildings and powered by renewable energy. For example, recent funding commitments in Western Australia to health and the arts failed to consider how this same expenditure could also reduce greenhouse gas emissions in those sectors. If we are to solve global warming, we need joined up thinking that considers the implications of our use of energy in everything we do. To do this, iconic new community facilities must become leading examples of eco-efficient design, and so epitomise the best in efficiency in energy and water use, with a further commitment to power those facilities with renewable energy. And these must not be stand alone icons – they must be iconic by being the first of many.

Opportunities exist to use sustainable energy projects as a way of restructuring and refurbishing towns and cities, and contributing to the renewal of flagging rural economies, creating sustainable communities.

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The only way to guarantee price savings on fuel is to consider the total fuel bill, not the price per litre. And the only way to do something about that is by raising the standards for vehicle fuel efficiency of the Australian fleet. Such measures will reduce running costs of Australian vehicles on imported fuels and reduce inflationary pressures on transported goods, on the household budget, and so ultimately on mortgage affordability.

As Australia responds to global warming, a key to managing Australia's greenhouse gas emissions is getting practical solutions to reduce our energy consumption through energy efficiency, as well as looking for sustainable sources of home grown fuels. Moves to improve efficiency will also address Australia's reliance on foreign imported fuels to grow energy independence: fuel and oil imports racked up a bill for Australia's deficit of \$25 billion in 2007. Rapidly improving Federal mandated energy efficiency targets for the Australian vehicle fleet will reduce costs to all consumers and reduce inflationary pressure on transported goods.

Combined with support for the biofuels industry in Australia, such measures will bolster energy security for Australia, and work to counter inflation. A more sustainable approach to managing Australia's economy will also reduce inflationary pressures and will reduce the likelihood of future interest rate rises from the Reserve Bank.

To do this, governments must create budgets that promote energy efficiency across government, business and the community by directing tax relief buyers investing in energy efficient homes, buildings, appliances and vehicles. In directing such initiatives to both consumers and businesses, an enduring tax cut would be delivered via savings in energy costs, as well as an economy with lower inflationary pressures, and of course reducing greenhouse gas emissions.

The housing industry has continuously blocked efforts to mandate higher energy efficiency standards over the last decade on arguments that this will make houses unaffordable. Those efforts have created inefficient housing with the obvious consequence of locking the Aussie battler into a cycle of debt through building standards that produce homes that guzzle energy, have higher energy bills, and result in less money left over for mortgage and rent payments.

As with fuel, the only way to guarantee price savings on electricity is to consider the total energy bill, not the price per unit. And the only way to do something about that is by raising the standards for building efficiency. The best thing any government can do today is to ensure that building standards and the first home owner grant supports the construction of energy efficient homes with reduced running costs. Sales and rental advertising must be required to disclose energy efficiency on both new and existing homes to allow the potential home owner or tenant to compare the running costs in different houses. In the longer term, an energy efficient home will be a financial winner for tenants and home owners. Governments delivering energy efficiency will be providing long term savings that will become increasingly valuable as energy prices rise and so far more effective than tax rebates.

Measures that promote energy efficiency across government, business and the community by delivering energy efficient homes, buildings, appliances and vehicles will provide the equivalent of an enduring tax cut via savings in energy costs.

Governments must look to move all public transport to renewable energy as soon as possible – either in the form of electricity from renewable sources for rail, or biofuels from sustainable sources for as much of the road fleet as we can.

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Agriculture and rural communities

An Australian Bureau of Agricultural and Resource Economics (ABARE) report¹ suggests a massive decline in farm production and agricultural export earnings in coming decades, unless we can halt climate change or adapt to it, underscores the need to strengthen rural communities to help with the battle against climate change.

Responding to climate change will create new business, new employment opportunities, and a more sustainable economy in Australia. Many of these opportunities will of necessity be spread across the regions in rural Australia, and will not just be growing for the biofuels market. There will also be opportunities building, supplying and maintaining regionally distributed renewable energy generation plant, as well as new returns for land required to be dedicated to wind farms and solar farms.

Further, responding to climate change will diversify our industry base. It will create new businesses that are taking up the challenge to take advantage of new opportunities, and the result will be a more sustainable economy.

All Australian Governments must look to support a geographically widespread distribution of solutions. If this model is followed, a diversity of projects will be created, and this approach is more likely to drive innovation than would be achieved by a few large projects concentrated in just one or two areas.

Renewable energy generation is generally more labour intensive, and more broadly distributed across regions. With a better employment factor, renewable energy projects can lead to growth of local communities in rural Australia. And establishment of renewable energy generation projects will bolster a broad range of skills, particularly in agricultural regions. Biomass sources – either biomass for electricity generation or feed stocks for bioethanol and biodiesel production - in particular will draw on and build the skills already available in the regions.

In addition, Kyoto will open up investment in biosequestration by European investors looking to buy carbon rights in plantations in regulated and verified carbon offset schemes using trees or revegetation projects. These investments are likely to be in the billions of dollars. Investors turned up in the south-west of Western Australia before, late in the last century as Kyoto started, but then turned away when Australia failed to sign Kyoto earlier in this decade².

It is not often an opportunity presents itself twice.

Australia signing Kyoto will focus the development of an emissions trading system. Opportunities for rural Australia will be many and various – from producing carbon credits for the carbon trading environment to supplying resources to the biofuels market.

Another opportunity is in maximising soil storage of carbon, particularly through the implementation of slow pyrolysis and the use biochar/agrichar in soils. Bolstering soil stored carbon improves soil productivity, reduces the need to apply traditional fertilizer, as well as providing carbon biosequestration.

¹ Australian Bureau of Agricultural and Resource Economics (2007) Australian commodities December quarter | vol 14 (4)

² Pers. comm., Alan Bodger (SOLEIRA Limited and CarbonCredEx)

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These opportunities will be driven by both emissions reduction targets and by renewable energy targets in Australia, and through demand from international markets once we are formally part of Kyoto.

The key is ensuring a diversity of solutions including in energy supply for electricity production. Over-reliance on a single source of supply is not wise. A diversity of fuel and energy sources which can only be beneficial, bolstering a diversity of business opportunities as well as energy security in Australia.

Closing comments

Mandated targets to both deploy renewable energy while simultaneously seeking greatly improved efficiency are critical immediate steps. To this end, governments must legislate to provide a clear investment signal and market certainty, and not just go down a path of wishful thinking.

Developing renewable energy will be important from a number of fronts. While we must continue to look for technology-driven carbon negative strategies into the future, we must also start deploying already available renewable energies that can happen now. The Stern Report, now reinforced by the latest IPCC reports and a variety of new regional reports, clearly describes the economics of why we need to take measures now, and not wait for solutions that may - or may not - come in the next decade or two.

Australia has a wealth of sustainable energy resources and a remarkable array of opportunities for all forms of renewable energy including biofuels, biomass, and biogas and extensive, high quality resources in geothermal, solar, tidal, wave, and wind.

In biomass, apart from both bioethanol, biodiesel and electricity generation, additional opportunities lay in high-value wood products such as wood pellets, charcoal, activated carbon and eucalyptus oil.

If the scale up of renewable energies like wind, biofuels and solar farms - using both solar thermal and photovoltaic technology - occurs in concert with a price signal established by a carbon emissions trading scheme, I have no doubt these will quickly become price competitive with coal and gas operations. Other renewable energy sources such as wave and geothermal hold significant promise as dispatchable baseload and I expect they will also be strong contributors to the growth of renewable energy generation in the medium term.

An important aspect of adopting renewable energy now is it will act as insurance for the community in case attempts at the so-called clean energy solutions such as commercial scale carbon capture and storage (CCS) solutions do not succeed. CCS is technically possible but yet to be made commercial, and so the best hedge against delays in developing the technology commercially is to have more than one option, more than one outcome for the community. The key is ensuring a diversity of energy supply for electricity production and avoiding over-reliance on a single source of supply. Adding renewable generation to be a substantial energy source in the mix, even in the event that clean coal eventually arrives, provides a diversity of fuel and energy sources which can only be beneficial, bolstering a diversity of business opportunities as well as energy security in Western Australia.

Affordability and compensation

Coal-fired power producers calling for compensation on emissions trading cannot claim to have been caught by surprise, and must not be compensated.

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Investors and power plant owners alike have known a carbon price was coming for at least a decade since Kyoto, and some will have been anticipating this 15 years ago after the UN Earth Summit held in Rio de Janeiro in 1992.

Compensating investors for poor investment decisions seems a strange way for governments to interact with markets.

But, while carbon exposed generators should not be receiving compensation, it is appropriate for Australian Governments to step up and provide support for structural readjustments that must come to hasten the move to lower emission energy generation.

Similarly, export-exposed industries need special consideration – but not through free permits to emit. Rather, we need strategies that can provide emissions free energy. The best way to support export-exposed industries is by Australia engaging in a nation building exercise that brings Australia's world class renewable energy resources to projects and aspires to deliver carbon free exports for world markets.

And the claim that investors will be reluctant to commit to new coal-fired plants will cause power shortages is scare mongering - the smart investors are already busy investing in operations that replace coal-fired power stations with more efficient gas-fired power stations and with building renewable energy generation right now.

An investment in renewable energy the range of \$30 to 35 billion over the next decade will easily deal with the challenge of tackling a 2020 emission target in the range of 25-40% cuts. Simply compare \$31 billion promised in tax cuts by the Federal Government over several years.

Meanwhile, the Emirate of Abu Dhabi, a state of the United Arab Emirates with a population and a Gross Domestic Product less than that of Western Australia, announced in January 2008, a \$18 billion investment program to develop innovative technologies for renewable, alternative and sustainable energy, and that Masdar City to be the "first carbon-free city" in the world.

Compare this to the ASX - daily trade in shares on the ASX can be in the range of \$10-15 billion in value with almost two thirds of the value usually in around 20 stocks. Losses and gains on the ASX can change value of the market by \$40 billion in a day. By comparison, \$35 billion invested in Australia on renewable energy over a decade and reducing emissions is around \$3 billion per year – this is not a big number and it would make a world of difference.

Similarly, considering the total value of an emissions trading market. With Australia's greenhouse gas emissions at under 600 million tonnes, even if all of this were traded and valued at a large \$40 a tonne those total emissions are worth less than \$24 billion dollars per year. Compared to daily trades on the share market, this is small change – on rough numbers not even \$100 million per day. And as emissions reduce, the number is more likely to fall.

This is not to belittle the importance of the task of addressing climate change and designing the best possible emissions trading scheme to assist in the task of reducing greenhouse gas emissions – it will be challenging. And it must fundamentally change the way we think about energy and how we do business.

But it is also achievable, and won't break the economy.

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In fact, unlike recent experiences on the share market, the investments we are talking about won't be losses, they will be investments returning real profits in new operations that deliver new jobs in real, emissions free energy. Investments help build a more sustainable economy for Australia, and that won't cost the Earth - just save it.

Interestingly, comparing numbers on the ASX and the potential numbers in emissions trading, and given the share market represents all industry sectors and is a measure of community wide investment decisions, a simple levy of 0.1% on all trades on the ASX would yield more revenue than emissions trading and would share the burden across all public traded companies as well as avoid pressure on export-exposed industries.

Closing comments

The challenge of climate change must be the catalyst for changing the way we think about and plan infrastructure, changing the way we use energy and in so doing, future proofing our economy.

The future of energy in Australia and for the globe is an array of sustainable energy solutions incorporating low or zero emissions energy generation in whatever form that ultimately proves most economically competitive. And Australia must, as a commitment to nation-building, plan to deliver through our exports the most greenhouse friendly source of resources in the world.

It is time to give serious commitment to develop renewable energy resources, to establish real targets for sustainable energy – that is both energy efficiency and renewable energy - and set strong, market-based financial signals to stimulate commercial investment that reduces emissions.

This will require multiple measures across all available technologies and using all available energy efficiency measures. Market competition is important in the long term, but in the short term new technologies will need support to make it to the commercial phase – the urgency of dealing with climate change is that these cannot be left to natural market processes to grow to that point, but that significant measures must be in place to ensure that the potential of new technologies is reached as fast as possible.

Any measures must recognise that 2020 is not an end point, but a point on the journey to higher levels of emissions cuts, to greater investment in renewable energy and other low emissions technologies, and infrastructure investment and planning, including development of utility corridors, must take this into consideration.

Sustainability must logically lead to outcomes that are also anti-inflationary. Decisions taken in our development of emissions free energy in Australia must be forward-looking and nation-building, developing energy use practices and renewable energy sources that result in long term energy savings and reduce inflationary pressures from rising energy prices that would otherwise impact on the Consumer Price Index.

Market competition is important in the long term, but in the short term new technologies will need support to make it to the commercial phase – the urgency of dealing with climate change is that these cannot be left to natural market processes to grow to that point, but that significant measures must be in place to ensure that the potential of new technologies is reached as fast as possible.

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The Federal and State Governments must ensure that the unique opportunity arising in Labor Governments across Australia in 2008 is not wasted, and that collaborative efforts of all Australian Governments are generated and lead to real changes in the Australian economy – changes that can create a sustainable future for all Australians.

We need joined-up thinking to simultaneously tackle the threat of inflation and of climate change. A more sustainable approach to the economy deals with both issues at the same time - and with the same expenditure.

If you would like to discuss this submission, please call me on (08) 9481 3169 or email ceo@wasea.com.au.

Yours sincerely



Dr Ray Wills
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Western Australian Sustainable Energy Association Inc. (WA SEA)

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