TO Ms Anthea Harris Chief Executive Officer, Climate Change Authority

FROM Dr Harley Wright | Climate Sense

DATE 28 Nov 2013

Dear Ms Harris

Comments on CCA's Draft Report, "Reducing Australia's GHG Emissions – Targets and Progress Review"

I commend the Climate Change Authority on the detail and quality of its Draft Report on Targets Progress Review. If all carbon policy, domestic and international, adopted the clear scientific, economic and ethical[1] approach in this report, this difficult issue could be resolved sooner, fairly and with least cost.

For the record, and the benefit of others, I note my dismay at the new Government's asserted policy to scrap virtually all of the Clean Energy legislation, which includes the fixed price carbon tax, the subsequent emissions trading scheme together with the Climate Change Authority. This could be understandable if there were a well developed and credible alternative, which had good support from economists and policy experts. But there is not. Alarmingly, the intent seems to be to raze most credible domestic measures and additionally, and not foreshadowed before being elected, abandon some significant Australian commitments to the UNFCCC. This policy regression is a national embarrassment and leaves an unnecessary liability for our descendants.

Direct Action is likely to give Australia a cumbersome, costly and ineffective carbon abatement scheme that delays responsible action when strong and urgent abatement is needed now.

Emissions from light vehicles and methane from some animals are two significant sources of Australia's emissions, ca 10% and 12% respectively. Stronger measures on these, particularly direct pricing, would spread the load of abatement and increase the efficiency and fairness of future emissions reductions.

[1] The ethical principles are inherent in the CCA report's adoption of Contraction and Convergence ('Modified C&C') to estimate Australia's 'fair share' of the finite global carbon budget of 1,700 Gt CO_{2e} from 2000 to 2050.

CONTENTS

Specific Issues on which the Authority seeks comment

I make some brief comments below on specific issues on which you seek comment.

RECOMMENDED EMISSIONS REDUCTION GOALS

I support a 25% cut to emissions by 2020 (as mentioned previously in my May submission to CCA's Issue Paper on Caps and Targets).

Your report provides the appropriate reasons why this higher level is reasonable now. The cost to do so is small – you estimate it costs **only 4 to 10 cents in every $100 of income**. I also note Australia's high carbon intensity – hence the greater challenge to reduce our emissions to global per capita equality in the long term - our high personal wealth/income and that the two largest emitters, China and the USA, are undertaking strong reductions.

USE OF INTERNATIONAL EMISSIONS REDUCTIONS

I support the recommendation for Australia to keep access to genuine and cost effective international emissions reductions to help meet our emissions reduction goals.

Purchasing emission reductions ('permits' generic shorthand) from other countries (eg, the European Unions EUAs) can provide a helpful way to gain emissions reductions at least cost – and transferring wealth (in payments) to the countries selling permits. There are analogies to the net mutual benefits of free trade to the countries involved.

The draft report specifies *'genuine and cost effective international emissions reductions'*.

Some reductions, eg, from CDM and JI, lack precision because they need to estimate a BAU baseline, ie, they are based on 'additionality'. This inherent weakness has been accepted to enable interim abatement

measures where countries are not involved directly in carbon constraint or issuing permits. While additionality is accepted in those instances where there is no other option, I note that the Government's Direct Action concept seems to use additionality for targeting abatement where we already have precision with direct measurement to determine Australian carbon credit units ('permits' generic shorthand).

If Australia denies itself cheaper emissions reductions from purchase overseas it incurs unnecessary costs with no environmental gain. We'd be imposing economic self-harm to not use credible international emissions reductions.

AUSTRALIA'S PROGRESS TOWARDS ITS EMISSIONS REDUCTION GOALS – Chapter 12, Appendix D

Box 12.1 Modelled emissions reductions opportunities – *Need to use proven methods not frivolous experiment*

The report notes that modelling of possible reductions reflects outcomes using carbon pricing to initiate change. It notes that current legislation has a high level of coverage ie, includes many emission sources that have to surrender priced permits. Direct Action lacks details that could indicate the degree of coverage it might provide. Putting a direct price on estimated emissions has many virtues as a means to reduce emissions most efficiently; it avoids prescription and limits bureaucratic management to a minimum. Importantly, it energises emissions reductions everywhere the price permeates. The primary emitters have a cost incentive to lower their emissions. And the carbon costs flowing through in goods and services allows downstream consumers to adjust their purchasing pattern to lower carbon consumables.

There are significant emissions from liquid fuels for light vehicles – the report says 63% of the 15% of Australia's transport emissions, viz, 9.5%. Light vehicle emissions are not currently covered by the Clean Energy Acts. It is easy to include this source (ie, have it 'covered') and when it is, consumers will move to lower fuel use; eg, by buying more fuel efficient vehicles and using the vehicles less by changes to their movements, less trips, more efficient trip planning or change of transport mode. Each change may be small, but collectively there is a reduced consumption of liquid fuels and consequent carbon emissions.

It is difficult to see any means by which Direct Action could create the fuel reduction, achieved in many subtle ways, by direct pricing.

From my experience, I see few areas where Direct Action will be readily applicable. Electricity generation is one - a significant emitter. However it is already covered and the emissions estimate is direct and reliable. Direct Action seems to rely on hypothetical, business as usual (BAU) baselines to estimate reductions achieved – this 'additionality' should be avoided where possible. So the change from the current system to DA lowers the reliability of the abatement achieved on which the Government agrees to pay.

There are emissions, which are not covered at present, for which coverage is problematic. In these instances, second best means, often using an imputed baseline, are necessary. The Clean Farming Initiative is one. Apart from these hard to measure emissions, all other emissions can be covered and incur direct pricing, which is simpler, more reliable and less costly.

I note the strong support for the 'user pays' or 'polluter pays' principle. This is a centrepiece of significant bodies' recommendations on how to manage environmental externalities. It has been promoted by the Brundtland Commission, by the World Business Council for Sustainable Development and in *"Australia's*

National Strategy for Ecologically Sustainable Development" (1992). Australia's current Clean Energy Acts are a great exemplar of this principle.

It is baffling and alarming that the new Government remains intent on implementing the flimsy concept of Direct Action in place of tried and tested policy instruments recommended by leading economists. On appearances, Direct Action will give Australia a cumbersome, costly and ineffective carbon abatement scheme that delays responsible action when strong and urgent abatement is needed now.

Carbon management and policy needs to be a core part of government programs in countries with high per capita or significant emissions. It forms a mainstay to manage the natural resource infrastructure that sustains us. Other mainstay areas include; water and sewage management, land management including agriculture and forestry and ocean fishery management. Carbon reduction is essential to lessen the harm that we are unleashing by changing the physical and chemical properties of the planet's atmosphere. The accepted method to control pollution in other media is to limit, eg licence, emissions to avoid harm. This commonly means limiting the rate of emission to "the assimilable capacity of the environment". Dangerous warming of around 4°C is estimated on our current emissions with the highest abatement commitments made. We are clearly emitting above the assimilable capacity of the environment – and must make stronger reductions to limit warming to 2°C at most.

From my perspective the new Government is treating carbon management as a minor foible in its governance portfolios. The flimsy Direct Action policy concept lacks support from leading economists. Conversely, the existing Clean Energy Acts embody recognised best measures. Yet the Government proposes to remove credible, successfully operating measures and replace them with, at an unspecified time, a scheme almost certainly less effective, more cumbersome and more costly. It is alarming that an Australian government would engage in a frivolous experiment in place of proven measures. Words like 'unconscionable' and 'reprehensible' come to mind.

12.4.1 Overview of major opportunities and barriers

The draft report notes Australia's light vehicle emissions are not currently covered. **I suggest the Report recommend that light vehicle emissions be covered.** This is most readily and efficiently done using the existing Clean Energy Act framework. Vehicle standards is another option, though more prescriptive and possibly less effective.

12.4.3 Electricity –*amend ANSTO charter to legalise nuclear energy*

The draft report notes our electricity sector is one of the most carbon intensive in the developed world and accounts for ca 30% of our CO_{2e} emissions. It then discusses 'challenges to reducing energy demand'. Nuclear energy is considered in D3.4.3 where the helpful discussion seems 'tucked away'**. I suggest at least a brief mention be made of the nuclear option in the main part of the report**, eg in 12.4.3, eg, use the last para;

> "At present, it seems doubtful that planning and capital requirements for nuclear power could be overcome soon enough for it to compete with other low-emissions technologies for which costs are falling, such as solar thermal with storage. If small modular reactors become commercially viable in the short term, however, they could offer a less costly form of nuclear technology (BREE 2012a)."

I support this conclusion but suggest it add, eg, "The possibility of nuclear energy should be made possible by changing the ANSTO charter to allow for research into nuclear energy" - a charter it held as AAEC until 1987**. Additionally, the Report could suggest the Government looks at ways to lift Australia's**

nuclear technical skills. I believe that all plausible options need to be on the table to deal with emissions reductions – so Australia is always in a position to move skilfully and efficiently to the best opportunities.

12.4.8 Agriculture – *no sacred cows*

The report indicates that enteric emissions from animals (eg, cattle) are around 12% of Australia's total emissions. This is significant and little absolute change is seen in the future**. I suggest the Report recommends that stronger efforts are needed to lower total enteric emissions from farm animals.** The report notes ways to reduce emissions from individual animals but I did not see mention of reducing demand for the animal products. Why not impose a carbon price on animals going to market? It may be difficult to have an *accurate value* of emissions for each animal going to market but it should be possible to get a *reasonable estimate*[2], eg, less than 50% error, with an algorithm of basic parameters, eg, carcass weight, age (from animals ID tag), breed of animal and possibly nature of pasture or even methane limiting treatment of animals. Putting a price on each carcass for a conservative estimate of emissions, say 50% of the algorithm emission value, then puts some of the pollution price onto the products. Consumption and emissions would decline accordingly as consumers moved to alternatives, eg, kangaroo meat.

Comments by Chapter

Chapter 8

On page 94, in discussion of 'Carryover from the first commitment period of the Kyoto Protocol', **I support the Authority's view;**

" . . . the Authority is disposed to favour the carryover being used to strengthen Australia's target for the following reasons: . . . "

Chapter 9 Australia's emissions budget to 2050

9.4 Australia's National Emissions Budget [page 103]

I support with qualifications the Authority's proposed national emissions budget of 10.1 Gt CO_{2e} from 2013 to 2050, which is equivalent to about 17 years of current Australian emissions.

I firmly support the broad principle using Contraction and Convergence to estimate this budget from the global emissions budget of ca 1100 Gt CO_{2e} from 2013 to 2050. My qualification is that the quoted value is likely to be too large because of the unrealistic, late convergence date, 2050, you used.

I have carefully considered the many options proposed for countries to share the limited global carbon budget – the crux of the climate change debate. Your report and Professor Garnaut's reviews provide careful consideration of the options and their pros and cons. I agree with the conclusion in favour of contraction and convergence for the various arguments given. Contraction and convergence is feasible, acceptable too many parties and equitable.

Accordingly, I suggest the Authority proposes to the Government that it promotes, through the UNFCCC, contraction and convergence as a basis for an agreement, especially at the Paris COP in 2015.

[2] 'Reasonable estimates' of low reliability/accuracy are used to assess emissions liabilities under the present scheme for landfill gases containing methane. The estimates use contentious formulas and methods yet the waste industry accepts the reasonable estimate and pays accordingly. A similar situation could apply to cattle and other methane emitting animals. Their emissions are around 5 times those from the covered landfill sector.

On page 98 the draft report states, "The Authority has used 2050 as its preferred convergence year . . . ." I understand from the Global Commons Institute in London [www.gci.org.uk] that at the COP in Copenhagen, insistence by European negotiators on a 2050 convergence date for contraction and convergence was the principal reason that agreement was not achieved. Apparently, there was widespread agreement on contraction and convergence being the best way forward – but the proposed 2050 date for convergence was not negotiable, from a European perspective. This killed an agreement. When you do the sums, it is clear why 2050 was unacceptable to developing countries – and surely always will be? They gain little, slowly from the sale of their carbon entitlements to the high carbon countries.

The equal per capita entitlement is indisputably equitable in the future. How you get there is the subjective, debatable issue. In my view, under contraction and convergence, a more immediate convergence date could be negotiated acceptable to both sides of the high and low carbon countries. A vigorous debate between high and low carbon countries over a convergence date between 2020 and 2030 would seem realistic.

Also consider the significant payments from developed to developing countries. These payments come from a full and fair market in emissions and provide a non-contestable cash flow to developing countries. With very short convergence dates the permit trade is likely similar to the $100 billion per year promised for the Green Climate Fund. The criteria for calculating countries' contributions to this fund are vague – as are the criteria for granting its funds to developing countries. Surely the equity of contraction and convergence with an early convergence date is a better way to deal with both issues, viz, carbon allocation and funds to assist low-carbon development in less developed countries?

I suggest the Authority consider estimating Australia's emissions budget using say 2025 as the convergence date. This would illustrate the sensitivity of the Authority's single date of 2050. I think we'd be dreaming to think that 2050 would ever be an agreed convergence date. Hence our realistic Australian carbon budget will likely be less than your quoted 10.1 Gt $CO_{2e.}$

I note and support the concept of 'modified contraction and convergence' as proposed by Prof Garnaut in his 2008 Review.

Chapter 10 Economic implications of Australia's emissions reduction goals

I suggest the final Report note more prominently that carbon reduction generally incurs costs relative to doing nothing[3]. This inconvenient truth needs to be well understood. It can help people understand the need to use the most cost-effective means to reduce emissions - which we need to do to avoid the worst effects of global warming.

The forecast economic costs of the two, mooted reduction targets to 2020 of 15% or 25% should be highlighted – not just in the box heading to Chapter 10. The projected annual changes in GNI of 0.02% for a 15% cut and 0.04% for a 25% cut (medium price scenario) are relatively trivial averaged over the whole economy. **A personal cost of 2 to 10 cents in every $100 of income achieves seemingly large emission reductions of 15% and 25% respectively** (depending on the carbon price)**. This should be given greater prominence in the Summary, eg at top of page 11** (opposite '*The Authority has considered the implications of stronger targets'*). Also I'd suggest quantifying the decrease in emissions intensity/GDP by saying eg, 'in 1990 $100 dollar of GDP took an emission of 80? kg CO_{2e} which has dropped to 40? kg CO_{2e} in 2012. Ie, wealth creation is 50% more carbon efficient – and further carbon efficiency is readily possible.'

[3] If we do nothing, huge costs occur later from dangerous climate change. The costs of abatement now, reduce those future, huge costs and limit dangerous, probably irreversible, climate change.

Also bring Table C.2 into Chapter 10, use the additions made below showing the 'drop in GNI growth' in making stronger cuts of 15% or 25% than the 5% base cut – and use in the Summary (noted above).

TABLE C.2: Average Annual Growth in GNI per person 2013 – 2020 (%'ages)
and drop in growth by stronger cuts than 5%

TARGET	HIGH SCENARIO	Drop in GNI growth	MEDIUM SCENARIO	Drop in GNI growth	LOW SCENARIO	Drop in GNI growth
5 per cent	0.73%		0.80%		0.82%	
15 per cent	0.68%	0.05%	0.78%	0.02%	0.82%	0%
25 per cent	0.63%	0.10%	0.76%	0.04%	0.82%	0%

Many people fear change and when a proposed new state is not particularly clear people tend to imagine the worst. Fear of large cost increases with a 'price on carbon' probably feeds much uncertainty and opposition to current economic measures – a carbon tax leading to an emissions trading scheme. With over a year's operation of the fixed price carbon tax, surveys showed consumers seem to have accepted small changes with equanimity, despite the high price of ca $25/t CO_2. Some business 'saw' their cost base increase visibly but I suggest they tend to overlook the fact that they can and have passed through the costs to domestic customers. Explaining the small, quantitative cost increases from significant abatement could help lessen concern and opposition.

Section 10.3 focuses on the small net costs of emissions reduction targets averaged over the economy. At a sectoral and more detailed level, there may be some significant effects. It seems reasonably these be acknowledged and with seemingly cold-hearted economic logic, note that structural changes always occur in a healthy and progressive economy and carbon reduction is a necessary requirement to help avoid dangerous climate change and has some unavoidable and disrupting effects on some sectors. Conversely, low carbon activities will generally gain, though the net effect to the economy is a small loss as shown in Table C.2. Change is necessary to adapt to new conditions.

There is an additional point in favour of the higher, 25% cut now. If we don't make stronger cuts now, we leave tougher reductions to our children and the costs overall will be greater. It is less total cost and less painful to make steady cuts from now.

Minor editing comment:

Nb; last para on page 94 states, *"In terms of Australia's . . . QELRO (99.5% reduction from 1990 levels over the period 2013 to 2020) . . . "* might be reworded to avoid the false interpretation of, *"a reduction **of** 99.5% from 1990 . . . "* but rather, *"reduction **to** a 99.5% **target** from 1990 . . . "*.

Summary - key comments and suggestions

Direct Action is likely to give Australia a cumbersome, costly and ineffective carbon abatement scheme that delays responsible action when strong and urgent abatement is needed now [p 1]

Emissions from light vehicles and methane from some animals are two significant sources of Australia's emissions, ca 10% and 12% respectively. Stronger measures on these, particularly direct pricing, would spread the load of abatement and increase the efficiency and fairness of future emissions reductions [p1]

I support a 25% cut to emissions by 2020. A personal cost of 4 to 10 cents in every $100 of income for this 25% emission reduction should be given greater prominence in the Summary [p 2]

I support the recommendation for Australia to keep access to genuine and cost effective international emissions reductions to help meet our emissions reduction goals [p 2]

I suggest the Report recommend that light vehicle emissions be covered [p 4]

I suggest the possibility of nuclear energy should be made possible by changing the ANSTO charter to allow for research into nuclear energy – and [p 4]

The Report could suggest the Government looks at ways to lift Australia's nuclear technical skills [p 4]

I suggest the Report recommends that stronger efforts are needed to lower total enteric emissions from farm animals. Why not impose a carbon price on animals going to market? [p 5]

I support the Authority's view;

" . . . the Authority is disposed to favour the carryover, from the first commitment period of the Kyoto Protocol, being used to strengthen Australia's target for the following reasons: . . . "[p 5]

I support with qualifications the Authority's proposed national emissions budget of 10.1 Gt CO_{2e} from 2013 to 2050, which is equivalent to about 17 years of current Australian emissions [p 5]

I firmly support the broad principle using Contraction and Convergence to estimate this budget from the global emissions budget of ca 1100 Gt CO_{2e} from 2013 to 2050. My qualification is that the quoted value is likely to be too large because of the late convergence date, 2050, you used [p 5]

I suggest the Authority proposes to the government that it promotes, through the UNFCCC, contraction and convergence as a basis for an agreement, especially at the Paris COP in 2015 [p 5]

I note and support the concept of 'modified contraction and convergence' as proposed by Prof Garnaut in his 2008 Review [p 6]

Thank you for the opportunity to comment on this sound draft report. I look forward to the final report. This draft is an awesome compendium of information on Australia's past efforts and future potential to reduce its GHG emissions.

Harley Wright

Dr Harley Wright | Climate Sense