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Mr Bernie Fraser
Chairman
Climate Change Authority
GPO Box 1944, Melbourne VIC 3001

Dear Mr Fraser,

Submission to the Climate Change Authority's Caps and Targets Review

The Victorian chapter of the Sustainable Engineering Society (SEng), as a technical society of Engineers Australia appreciates the opportunity to make comment on the Climate Change Authority's (CCA) Caps and Targets Review. SEng is a learned body that represents the interests of engineers in promoting information transfer regarding environmental issues of relevance to the environmental engineering profession and other environmental practitioners. As the CCA's Caps and Targets review holds immense relevance to many of our members, SEng is well positioned to provide feedback and recommendations, grouped loosely under the guidelines for CCA submission below.

Australia's 2020 emissions target

There appears to be a commitment under the *Clean Energy Act 2011* of recognising and acting upon the international need for limiting global warming to 2 degrees. This is a given from the CCA Caps and Targets review (Ch. 1.2). However it has become apparent that in many models including the most recent review of the Intergovernmental Panel on Climate Change's (IPCC) models for temperature projections by one of your own panel members Prof David Karoly (Nature Climate Change, June 2012) that we are reaching very high likelihoods of exceeding the 2 degree barrier set as an objective for Australia and the world to work towards reaching.

Former head of the IPCC, Sir Robert Watson provided two public lectures recently in Melbourne questioning if we have a sustainable future. In this talk he highlighted his concern at the lack of action from governments at all levels in dropping the rate of the past half century's inexorable rise in atmospheric carbon dioxide readings. Having recently passed 400ppm CO_2 -e and well on track to pass 450ppm, is our 2 degrees warming target being taken seriously at all? It is stated in the CCA review that "deep and rapid cuts in global emissions could allow the concentration of greenhouse gases in the atmosphere to stabilise at 450 parts per million CO_2 –e" (which loosely corresponds to 2 degrees warming). Whilst the CCA review suggests that there have been actions taken by successive Australian governments in this space, it would appear currently that bilateral agreements on our emissions targets at a national level are about as far apart as they possibly could be. Demand will come from business for strong and binding commitments that can be exempt from the political cycle and provide stability similar to what has been witnessed in the European Union over the past decade.

The importance of not going beyond this 2 degree limit does not need further explanation (and many climate scientists are targeting even lower temperature increases including Dr James Hansen who holds the view that we need to return to 350ppm), and yet we are presently looking at indefensible conditions coming from the Australian government's proposed emissions reductions outlook to 2020. In reducing our own emissions by 15% on 2000 levels, we are expecting to have a verifiable commitment from advanced economies to have reductions in aggregate in the range of 15-25% below 1990 levels. All we are doing with such a commitment is agreeing to meekly follow our peers in the G20 from the rear. Our target is at the lowest end of this range of emissions cuts and our base level emissions are 2000 rather than 1990.

Similar can be said for the 25% reductions commitment, except that this at least recognises the direction where we need to be headed if the Clean Energy Act 2011 recommendations are something we will take seriously and act upon. SEng holds the belief that we need to be pushing for strong action as recommended by Professor Garnaut in his 2008 climate change review and that this means targeting cuts to emissions of 25% or more with the aim to stabilise at our CO_2 –e at 450ppm or below. There needs to be a clear identification of the role of Australia in leading emissions reductions, with our unenviable pole position in the ranking of countries by per capita emissions.

The emissions trajectory and budget

The emissions budget has verifiable science behind it to suggest that there is a quota of emissions releasable over a set timeframe, and SEng holds the view that this should be the focus of the CCA in formulating its submission to the Australian Government. The budget is ultimately what will allow climate goals to be reached. The trajectory is certainly worthwhile at the same time, as it can also have a similar effect, by mostly providing an outlook for business and giving certainty on the governmental approach. Unfortunately economic fluctuations appear to have a strong influence on carbon emissions in any one year as is witnessed in Figure 8, making trajectories difficult to rely upon. The trend however requires further investigation to see if there are means of smoothing the annual variance of emissions. The carbon trading mechanism needs tuning to allow for it to curb emissions in any year that looks likely to overshoot the trajectory.

Additionally, the budget as we look at it currently negates a lot of the responsibility for emissions to the country of use. In the case of exported raw materials and especially coal, taking this stance is effectively taking the stance that our resources are ours to profit from and the negative externalities belong to the importer. These materials may well then be destined for import back into Australia for local consumption after another country has dealt with the dirty business of making consumer goods from the raw material.

SEng sees this is a matter of concern that is not currently being sufficiently addressed in the Caps and Targets Review from the CCA and which warrants serious review of potential inclusion to the carbon budget if we are to be seen taking Garnaut's recommended 'strong action' against climate change. We are otherwise going to be stretching the boundaries of 'uncovered emissions' well beyond the current scope and addressing only a fraction of the total greenhouse gas production in this country. The ramifications of inclusion may be large, but improved policies that empower the Australian Renewable Energy Agency (ARENA) to ensure carbon market stability and incentivised low-emissions technology development will greatly assist the development of new commercially viable energy generation technology. Such low-emissions technology could itself be 'exported' and replace our need for offshored emissions through our mining sector.

Caps from 2015/16 through to 2019/20

Professor Ross Garnaut's recommendation during the recent public lecture co-hosted with the CCA in early May of a 17% reduction on 2000 levels holds a lot of weight. This is especially in the context of global emissions target negotiations and commitments with the US and China holding now ambitious targets that put Australia's unconditional 5% cut on 2000 levels to shame. Garnaut and Harris made the comment during this talk that in the context of targets being set around the world where there's been concerted effort to achieve them "it's turned out to be easier than anyone predicted in the past."

Our thought is that this requires some quantification and thought needs to be put into how our current targets may in fact turn out the same way, dependent on the economic environment of the time together with the rate of change of other variables such as industry innovation in contributing to this. Whilst Garnaut has said that this is something to be put to the Paris UNFCCC conference in 2015, we believe that the more ambitious targets should be able to be set with this knowledge in mind, and that 25% and beyond is not at all unreasonable.

Post 2020 recommendations

The goals to 2020 are very important and similar timeframe goals for 5 to 10 year intervals are just as important beyond this time frame. Most importantly however it is crucial to have transparent dialogue as is the case with this Issues Paper review going forward for future reviews so that time frames become apparent as early as practicable, and public discussion and input can have its greatest impact.

The conditions upon the current 2020 emissions targets appear to be very onerous and can have a very detrimental impact on the promptness of our action. As a country that has amongst the highest capability to act (with high emissions and an advanced economy) and a very high responsibility for our actions for the same reasons, it is important that these conditions are reviewed and considered in terms of how defensible they really are. The importance of strong action and the fact that the Garnaut review has provided a report 5 years ago with the conclusion that the costs of action outweigh that of inaction means that stalling progress towards achieving our targets simply because of a need to meet some inequitable conditions should be the last thing on the Australian Government agenda.

Australia's progress towards 2020 and 2050 targets

It is hoped that Australia will be able to look at its progress towards its emissions targets with the whole picture in mind. Economic trends have previously been shown to ally closely with the emissions intensity of any particular year and so these forecasts need to be tied into the carbon accounting balance as early as possible to provide an outlook that can be relied upon, and hopefully replicate observed emissions progress as close to the modelled scenario as possible. Too many of the so-called trajectories are currently simple (and even linear in the case of Figure 5) extrapolations of a simple mathematic graph showing our projected progress into the future.

The most recent case of this simplistic projection into our future relates to the inter-linking of the Australian Emissions Trading Scheme (ETS) with the European Union ETS. A recent significant drop in the European carbon price was not anticipated by any economists in early 2011 (source: Stephen McGrail) and predictions of what will happen between now and 2015-16 when the two ETS's are linked are as difficult to predict. Hence the claims echoing across the Australian parliament of an anticipated 'carbon budget black hole' in the range of A$6-8 billion hold little meaning until further work is done to reasonably predict (if at all possible) the movements of this complex market.

General comments Chapter 6

As is depicted in Figure 6, the need for immediate action is absolutely paramount if substantive deep cuts are to be made to the emissions of this nation. The longer the action is postponed, the more difficult the same target will become.

The current quantity of uncovered emissions is shown very neatly in Box 1 to be declining at the same rate as the covered emissions. This assumption may well be flawed unless there are some forms of incentives (rather than caps and targets) that look at how this component of our emissions can drop to levels reasonably possible. Economic incentives discussed by Sir Robert Watson for the agricultural sector landowners to maintain the environmental integrity of their land in addition to maintaining their bottom line profit may be models to assist our progression to modelling the impact of uncovered emissions in our global carbon budget. Providing a business as usual allowance for these sectors unequally distributes the emissions cut burden through the economy but can be done in ways that are not economically taxing so much as rewarding.

The range of emissions considered under the CCA review needs to be wide ranging and not fettered by commitments to single bodies like the Kyoto Protocol with its omission of aviation due to lack of agreement during 2009 talks in Copenhagen.

Another exclusion from earlier consideration in Australia is a vehicle fuel efficiency and emissions standard. Whilst it would appear that this oversight is now being considered by the Minister for Transport (with full effect as late as 2018), this is an example of where Australian action on climate change is taking its own path without sufficient consideration of the positive changes being made by other countries. The fact that all 7 of the other countries listed in Table 2 of the CCA report use vehicle emissions standards rather than Australia's "effective carbon pricing through differences in fuel tax credits for some transport" makes the case clear that more discussion needs to be had with our economic peers on the international stage to share the knowledge of policy mechanisms and means for action on climate change. This is further testament to the inertia of the policy system with regard to climate action which as yet retains an uncertain foothold in the ranks of both major political parties.

As a global issue facing the planet, and in one of the most economically able positions to provide leadership and strong action in cutting emissions, Australia needs to consider how its impact can be used to provide a platform upon which other countries can follow in reducing emissions. This applies equally as much to the governmental policy side as private sector. There is currently some concern that action on climate change rests solely within government. Investments by private sector made in emissions abatement technologies, energy efficiency, and green business practices can become models for climate action. It is important that the Australian government supports the efforts of its private sector in this regard, through developing incentives for distribution and sharing of knowledge across a range of platforms. SEng has the belief that CCA can provide the recommendations to government for such support mechanisms to be put in place which can maximise the potential contribution possible from across a broader spectrum of society.

As a finishing comment, the Sustainable Engineering Society commends the Climate Change Authority's work in development of a policy through which Australia can link its caps and targets to a scientifically determined 2 degree limit. It is hoped that the CCA will take the decisive and strong action mantra to heart in setting out recommendations for the Australian government and provide a framework through which industry can receive assurance through multiple short term targets of the intended trajectory for Australia's emissions. We believe that with consideration of our input to this submission the CCA can take on a truly leading position on climate change and will assist it in making commitments that we can later look back upon as having laid the foundation for an ambitious and steadfast Australian climate change policy.

Should you have any questions in relation to this submission, please do not hesitate to contact me on (03) 9975 3329.

Kind Regards,

Ray Pritchard
Committee Member
Victorian Chapter, Sustainable Engineering Society