SUBMISSION TO THE CLIMATE CHANGE AUTHORITY SPECIAL REVIEW SECOND DRAFT REPORT ON AUSTRALIA'S CLIMATE POLICY OPTIONS

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Submission to the Climate Change Authority Special Review Second Draft Report on Australia's Climate Policy Options

SUMMARY OF SUBMISSION

- The Paris agreement on climate change explicitly recognises that national contributions are not sufficient to hold global warming to the guardrails of 2 degrees and 1.5 degrees Celsius. The agreement includes a process for nations to regularly revise and increase the ambition of targets. Accordingly, the Authority must assess policies on the basis of how quickly they will have an impact on emissions and how rapidly they can be ratcheted up in order to achieve deeper emissions cuts than Australia's current targets.
- The Authority should broaden its assessment of climate change mitigation policies to consider the wider social impacts of policies, in addition to cost-effectiveness, environmental effectiveness and equity considerations.
- To ensure that policies are designed to work for conditions that will be encountered in the real world, a strategic approach to emissions reductions should be developed, rather than a narrowly defined framework of economic optimization. This should involve the pursuit of mitigation across all sectors of policy and levels of government, recognising that emissions reductions will not always be the primary aim of policies.
- It follows that the introduction of market mechanisms such as emissions trading or carbon taxes should be considered in conjunction with other policy approaches, including targeted support for renewable energy, regulations, funding for research and development, and well-designed programs to understand and support changes to social practices.
- In addition to providing incentives for the phase-in of renewable technologies and energy efficiency, the Climate Change Authority should examine innovative complimentary policies to regulate the least efficient electricity production capacity.
- The impact of policies on Australia's international competitiveness should be assessed in the context of the Paris agreement and the creation of opportunities for Australia to participate and lead in developing solutions to the causes of climate change and adapt to its inevitable impacts.
- The Authority should also examine further policy opportunities that could bring significant benefits to Australia, including emissions reductions, such as reform of the national electricity market to support a greater share of renewable and distributed energy, reviewing industry support mechanisms for fossil fuel producers, incorporating climate change considerations into all major policy decisions and halting the approval of new coal mines.

COST EFFECTIVENESS, ENVIRONMENTAL EFFECTIVENESS AND EQUITY

The Draft Report on Australia's Climate Policy Options (the Report) proposes assessing climate change mitigation policies based on cost effectiveness, environmental effectiveness, equity and international competitiveness. The report defines each of these criteria in terms of economic impacts and benefits.

It is important that policies are also assessed in terms of how quickly they will have an effect on emissions and how effectively they can be ratcheted up. The Paris agreement explicitly recognises that existing national commitments will fail to achieve the objective to hold global warming to well below 2 degrees Celsius and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius. The agreement establishes a review mechanism to encourage national mitigation efforts to

be strengthened over time [1]. Australia's emissions reduction targets should be strengthened consistent with Australia's fair share of the internationally agreed objective.[1] Australia's climate policies should also be assessed in terms of how quickly they will take effect and how rapidly they can be scaled up in the context of this objective.

In terms of assessing the cost-effectiveness of policies, cost-benefit analysis frameworks often only consider the direct costs and primary intended benefits of an action, and avoid consideration of wider social impacts. There is significant evidence that climate change mitigation measures have a range of positive effects on human health, ecosystem functioning, macroeconomic, and social and/or equity side effects. These co-impacts of climate change policy can be difficult to include in cost-benefit analysis frameworks, even though their inclusion can significantly change the outcome of economic assessments [2].

The Authority may find it useful to consider an article in the 2014 *Annual Review of Environment and Resources* that identifies different methods of quantifying and monetizing co-impacts and describes several methods to integrate co-impacts into decision-making frameworks. The authors of this article encourage a multiple-objective / multiple-impact assessment framework, noting that "climate policy and climate investment rarely takes place for the sole purpose of mitigating climate change, but most typically these serve other primary purposes, with the co-benefit being climate mitigation" (p557).

Approaching emissions reduction policies in this wider sense, Nicholas Stern challenges the assumption that addressing climate change is net-costly to the nation state. In his book 2015 *Why are we Waiting? The Logic, Urgency and Promise of Tackling Climate Change,* he presents evidence that emissions reduction policies are in the majority of cases net-beneficial to nations, even in a strict economic efficiency sense. According to Stern, actions that reduce emissions also "make markets function better, improve infrastructure, stimulate investment and innovation, reduce inefficiencies and waste in the use of energy and other natural resources, improve energy security, and reduce local forms of environmental pollution and damage" [3].

This frames climate change as more of a strategic challenge than a problem of economic optimization, and highlights the importance of pursuing emissions reductions across all sectors of policy and at multiple levels of government. Climate change policy must take into account the real-life conditions that energy and climate policies have to cope with [4]. There are indications that developing policy from the 'bottom up', and prioritising the direction of travel over targets and timetables, may be a more effective way to introduce policies that work in the real world, overcome political and societal barriers and generate rapid and lasting action on climate change [5, 6].

POLICY INSTRUMENTS

The Report asks for feedback and input on how different types of emissions reduction policy perform against the proposed assessment criteria of cost effectiveness, environmental effectiveness and equity.

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[1] In it's April 2015 Report on Australia's future emissions reduction targets, the Authority recommended a range of 40 to 60 per cent reductions from 2000 levels by 2030, consistent with Australia playing its fair part in global action, while providing flexibility to adjust policy in the light of new information.

EMISSIONS TRADING

The Report considers various forms of emissions trading as policy options, consistent with the Minister's direction. During the two years that Australia's fixed price emissions trading scheme was in effect, analysis suggests that it had a short-term impact on emissions in the National Electricity Market [7]. While these effects seem consistent with intentions, many of the emissions reductions were a result of the unsustainable running down of hydro capacity [8]. While this is a testimony to the effectiveness of price signals, impacts on longer-term investment decisions were probably limited because of uncertainty about the continuation of the carbon pricing mechanism, reinforcing the need to introduce long-term stable policy settings in Australia. Emission trading has the advantage of being applied upstream to the largest emitters, which could potentially be a communication benefit compared to downstream measures of some tax proposals or some regulation.

The complexity and challenges of emissions trading strongly indicates that if Australia does reintroduce emissions trading, it should again be considered as one of many policy tools. The 2008 Stern Review proposed a three-tiered approach of carbon pricing (through tax, trading or regulation); support for innovation and the deployment of low carbon technologies; and action to remove barriers to energy efficiency [9], highlighting the importance of multiple policy tools.

CARBON TAX

A broad-based carbon tax can in many ways be simpler than emissions trading. While also being able to capture revenue, taxes have lower administration and compliance costs, are more direct and transparent, provide certainty and stability across all economic sectors and markets [11]. Auctioning of emission trading permits and fixed price floors can merge the respective benefits of emission trading and carbon tax designs.

VOLUNTARY PRICING / OFFSET SCHEMES (ERF)

The Government's Emissions Reduction Fund would compliment an emissions trading scheme by generating offsets that polluters would be able to purchase. With that said, the scheme in its current format contains strong weaknesses in terms of ensuring that purchased abatement would not have occurred otherwise, the high costs of scaling up emissions reductions, the lack of any mechanism to capture revenue and the high baseline of the safeguard mechanism allowing, for example, emissions from the electricity sector to grow [12]. The Authority should consider whether Emissions Reduction Fund and Direct Action policy in these regards can be fixed.

MANDATORY TARGET SCHEMES (RET / TRADABLE CERTIFICATE SCHEMES)

National and local targets for installed technology provide a more realistic and verifiable mechanism for reducing emissions than global targets [5]. Renewable energy policies provide the policy certainty needed to support long-term investment in renewable energy projects, whether they take the form of volume-based incentives or price-based incentives. Research into the interactions between renewable energy support schemes and market-based mechanisms in the EU supports the complementarity of these policy approaches [4].

According to analysis by Bloomberg New Energy Finance, investment in large-scale renewable energy in Australia remained stagnant for nearly two years while Australia's RET was under review.

This is in contrast with global investment in renewable energy growing 20 per cent over the same period. Stable state-based schemes in South Australia and the ACT have supported continued investment in large-scale renewable energy projects during this period [13]. The Authority should broaden its consideration to include the range of price and volume based incentives that target low-carbon technologies, as well as opportunities to support greater community participation and investment in projects [14].

PHASE OUT POLICIES

In addition to providing incentives for the phase-in of renewable technologies and energy efficiency, the Climate Change Authority should examine innovative complimentary policies to regulate the least efficient electricity production capacity. Specifically, the detailed proposal by the Australian National University for a market mechanism for regulated closure of highly emissions intensive power stations warrants consideration in the Authority's report [15].

REGULATION

There are many opportunities for regulation being employed to reduce emissions quickly and effectively while creating positive benefits such as through improvements to air quality, energy and material efficiency, health and safety. In many cases these benefits may warrant the regulation on their own, with reduced emissions a welcome co-benefit. It is also important that existing standards are met and existing regulations are enforced, as well as setting standards for new projects so as to avoid locking-in high future emissions. For example, buildings in Australia are routinely not built to meet the highest energy efficiency standards possible. According to the head of the Clean Energy Finance Corporation in a recent senate estimates hearing, less than 20 commercial buildings in Australia are built to the highest NABERS rating, putting Australia significantly behind the rest of the world with regard to best practices [16].

INFORMATION PROGRAMS

Information and advice tends to focus on encouraging individuals to change their consumer choices or their behaviour without considering the broader factors that might constrain an individual's autonomy, such as access to resources, norms of social interaction, infrastructure and institutions [17]. There is some evidence of success from developing policy, which integrates expertise and insights from multiple fields, such as anthropology, economics and psychology, beyond the dominant technical and economic domains of analysis [18].

INNOVATION SUPPORT

As indicated in previous sections, support for climate science, research and development, a rapid uptake of low-carbon technologies and practices, and a targeted phase-out of the least efficient technologies are critical components of any strategy to reduce emissions and support Australia's transition to a low carbon economy.

INTERNATIONAL COMPETITIVENESS

The Authority's Report seems to characterise Australian trade export markets exclusively in terms of mineral resources, in particular in the final column of Table 1 on page four. It should be noted that global demand for coal and gas exports are falling in what some analysts are describing as a systemic change rather than a short-term adjustment [19]. Greater opportunities to support Australia's

international competitiveness are likely to be found in developing solutions to climate change, positioning Australia as an renewable energy superpower (including energy intensive industries) in a zero carbon world, and aiding the adaptation of Australia's agriculture industries.

FURTHER POLICY SUGGESTIONS

While the Authority has presented a concise range of policy options to reduce Australia's greenhouse gas emissions, there are many more options that should be considered.

Australia has significant potential to become a renewable energy powerhouse through the development of large-scale renewable energy alongside emerging opportunities for storage and transmission [20].

National electricity market reform should be considered to reduce network overinvestment and increase the penetration of renewable energy, distributed generation, battery storage and demand-side management to reduce costs as well as emissions. State based planning laws could also provide opportunities to support renewable energy projects and strengthen community participation and investment, as is the case in Denmark and Germany [14].

Industry support mechanisms should be reviewed to enable a fairer comparison between the cost of conventional and renewable energy sources, and to redirect public funds towards activities that will reduce rather than maintain or increase emissions. Methods for calculating subsidies to fossil fuel industries are varied, but several recent reports identify significant government spending directed to fossil fuel producers, mining industries and electricity generation [21, 22].

Legislative requirements can be a useful way of incorporating climate change into policy decisions and avoid locking-in high emissions trajectories over long periods, such as through new coal mining projects or poorly planned infrastructure projects. This is absolutely critical if the global carbon budget is not to be exceeded for the 1.5 and 2 degree Celsius guardrails [23]. The UK *Climate Change Act 2008* includes requirements to consider how policy decisions will affect the cost of meeting emissions reduction targets, and the United States EPA incorporates a social cost of carbon to estimate the climate benefits of regulations.

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