

Media Response

From the Garnaut Climate Change Review

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GARNAUT'S EMISSIONS TARGET – LET THE MARKET RULE

This document provides Professor Ross Garnaut's response to the questions by Lenore Taylor and John Breusch for article 'Garnaut's emissions target: let the market rule' on page one of the Australian Financial Review, 29 January 2008.

[AFR] if we calculated a long term emissions budget as you propose what would the role of interim targets be? You say they could form a "guide to market price formation" but wouldn't it be quite possible for the market players to decide to use more permits in the early years than maybe government might like, or than an interim target might indicate, because they believe new technologies will make it cheaper to reduce emissions later

[RG]

What actually matters to the environment is the total amount of emissions put into the atmosphere over time, not the amount that happens to go into the atmosphere in a particular year or in multiple particular years. What matters to the economy is using up a specified budget of emissions over time in a way that minimises cost. So if the goal is to achieve an environmental objective at a minimum cost to the economy, you would specify the total emissions budget, and let the market determine when permits were used within this budget. Every new bit of information about the emissions market, for example on progress with new technologies, would change the carbon price. It would also change the rate at which market participants wanted to use permits over time in a way that lowered economic costs of mitigation in the new circumstances. Such an environmentally and economically efficient carbon market could be established by the authorities specifying a "preferred" trajectory for reductions of emissions, allocating permits consistently with that trajectory, and allowing firms to "bank" unused permits, or "borrow" from future allocations.

In such an "economically and environmentally efficient" world, interim targets would provide the basis for allocating permits into the market over time. However, the number of permits actually used in a particular year would not necessarily be exactly the number allocated in that year. Market participants could choose to use permits at a faster or a slower rate depending on their views on technological progress and other matters. They could reduce emissions at a faster rate in the early years by banking some permits for future use, or at a slower rate by borrowing some permits from future allocations. Market participants would only vary the rate at which permits were used from the rates at which they were allocated (that is, vary the rate of use of permits from the interim targets), if they thought that this would lower the cost of achieving the specified environmental objective.

Would the market choose to use the permits at a rate that was faster than the Government liked? Not if the Government's goal was to live within an environmentally responsible emissions budget at the lowest possible cost to the economy.

However, if the Government placed greater emphasis on goals other than meeting firm environmental goals at the lowest possible cost—for example, meeting an international commitment to reduce emissions by a specified percentage in a particular year, whatever the environmental and economic costs of doing so, and I note that there may be excellent international policy reasons for emphasising such a goal—then it may not want to let the market set the rate of use of an environmentally responsible emissions budget in a way that minimises economic costs. The final reports of the Review will discuss the ways in which environmental and economic objectives may conflict with other international and domestic political objectives in the approach to interim targets, and take all of these matters into account in its recommendations. It is recognised that the environmentally and economically efficient way of setting multi-year emissions budgets would only work if there were widespread confidence that the budgets would stick. The Review is therefore examining ways in which the credibility of emissions budgets within such an approach might be enhanced.

One such expedient would be for the Government to give the responsibility for managing the release of permits within the specified total budget to an independent authority. In Australia, this suggestion is associated with the work of McKibbin and Wilcoxon. This “carbon central bank” could be required to allocate permits into the market on a specified schedule, consistent with “interim” and “long-term” targets, but be permitted to lend permits from future allocations, perhaps within specified rules and limits, to creditworthy borrowers. It would operate under a system of rules that would require it to monitor the market, and empower it to intervene during the periods of irrational exuberance or irrational depression that emerge occasionally in any market. Just as the RBA has open-market instruments, so too would the carbon bank be given such tools.

The interventions would be driven by an independent authority working to a very specific and transparent charter -- rather than by a politically vulnerable government.

Whether or not the Review recommends that variations in the rate of use of permits through borrowing and banking should be allowed, and any recommendations on the extent of any such variations, will be strongly influenced by the Review's eventual judgements about what can be done to ensure the credibility of the total emissions budget.

[AFR] If we calculated a long term emissions budget and then the science changed and governments had to buy back permits wouldn't the market know that and force up the price. Should governments reserve some of the initial income from the permit sales for that kind of contingency

[RG] There will need to be some scope for changing the emissions budget over time in the light of new information from the science. The possibility of change, and any such change, will increase business uncertainty, raise the supply price of investment, and increase the cost of achieving any specified mitigation objective. To minimise business uncertainty and the cost of mitigation, such changes should be kept to a minimum, and should only occur at specified times of review, and when conditions have been met that are closely defined in advance.

A carbon bank could respond to new science that required tightening of the emissions budget in two ways. It could, from the time at which the need for budget tightening became clear, reduce the rate of issue of new permits below what had initially been anticipated and announced. And, yes, it could retain some of the proceeds of sales of permits for buying back permits that had been

allocated in earlier years and which had been “banked”. The buying back of permits would require the carbon bank to operate within strictly defined balance-sheet rules.

Yes, the possibility of future changes in the total emissions budget—in the case that you specify, the possibility of tightening the emissions budget—would affect the carbon price in the market. This possibility would cause market participants to “price in” a certain probability of a certain amount of tightening of the emissions budget in future. In an effective market, in which market participants banked and borrowed permits to minimise the economic costs of mitigation, both the spot and the future carbon price would rise, in a way that left the forward price curve rising over time at the interest rate. (Here, the contango in the gold market would be the nearest comparator, for reasons that can be explained elsewhere). This would actually reduce the net costs of any future repurchase of banked permits by the carbon central bank, since the possibility of tightening would have been reflected to some extent in the initial sale price. The higher carbon price in the early years would increase incentives for firms to bank permits in those early years, in the expectation of capital gains from holding permits through a tightening in the emissions budget. Of course, if the anticipated tightening did not occur, firms which had banked permits would experience capital losses in due course. Firms would not face a one-way bet in taking a position on a future emissions budget tightening and a higher emissions permit price, and the two-way nature of the risk would help to keep help them honest.

[AFR] If we calculated a long term budget and allowed companies to decide their own timing of permit use wouldn't it be possible that governments would come under political pressure down the track if some industries miscalculated and found themselves facing a massive shortfall. And wouldn't it also be possible that governments would come under community pressure if the market used permits and reduced emissions more slowly than community sentiment thought proper.

[RG] On the business pressures, this is no different to the current relationship between governments and, say, interest rate, foreign exchange or equity markets. Businesses that make calls on debt that turn out to be wrong place strong pressure on Governments against tightening of monetary policy. This is why monetary policy has been much more effective since Governments have been insulated from that pressure by independent central banks. The establishment of an independent authority working within clearly defined rules is the appropriate response in the emissions permit market, as it has been in debt markets. If firms know that policy will be administered with integrity by an independent authority, they are more likely to take responsible positions on exposure to carbon prices. Once key decisions within a clearly defined policy framework are in the hands of an independent authority and market participants, the market will develop a range of instruments for firms to hedge and otherwise to manage carbon price risks. The bottom line is that once the carbon bank is established it controls the supply side of the emissions market, and the government should only intervene on the demand side, through measures that assist business and household adjustment to the new carbon pricing environment.

Community pressures to achieve certain targets in particular years raise different issues. To the extent that the community is interested in reaching responsible environmental outcomes, it will be more interested in total emissions than on emissions in particular years, without regard for what goes before and comes after. To the extent that this is not well understood in the community, I hope that the Review can play a role in public education. Of course, the environmentally concerned community will not be satisfied by multi-year budgets unless it is given good reason to believe that Governments will stick to those budgets. The establishment of credibility for emissions budgets is a central challenge for an environmentally and economically efficient approach to climate change policy.

[AFR] what is your view of the system advocated in the report to the former government where government would set a cap initially for a ten year period, with indicative gateways beyond that, and regular reviews to recalibrate the caps.

[RG] There is something to be said for such an approach. One downside is that it institutionalises periodic pressures on the Government to modify the emissions budgets. This increases uncertainty and also transactions costs associated with rent-seeking, and therefore raises the economic costs of any specified level of greenhouse gas mitigation. It may also reduce the chances of meeting specified environmental objectives. I would prefer to see firmer commitments to an emissions budget, with clearer rules around the circumstances in which the budgets might be changed. All of the questions that you have raised about certainty of meeting commitments to particular emissions reduction objectives in particular years would relate to the former government's approach as well, perhaps in more difficult contexts. These are complex matters, with many relevant factors to be considered.

Maybe ten-yearly review intervals, at which an independent authority examines whether the conditions have been met for a change in the budget, would be appropriate.