

Garnaut Review discussion paper on a proposed ETS

Comments by Andrew Elek

Introduction

Like the interim report, this is a very comprehensive and constructive paper. I agree with most of its proposals. The following comments may serve to enhance the effectiveness of the recommended ETS.

The ETS in a global context

(These comments on the context, if heeded, are most likely to be reflected in the early parts of the Review, rather than in the part which deals with an ETS)

A decision by Australia to implement an ETS is part of its strategy to contribute to stabilising the proportion of greenhouse gases (GHG) in the atmosphere.

This is an international game in which governments are the principal players, albeit influenced by the various interests of their constituencies. The nature of this game depends on perceptions of costs and benefits to individual governments. That, in turn, is influenced by the time horizons of the rulers and those they rule.

The international game of stabilising GHGs in the atmosphere has been considered to be a prisoner's dilemma game, since governments perceived that the marginal cost of limiting their emissions exceeded the marginal benefits to them.

This perception was due to a combination of:

- considerable uncertainty about the consequences of emissions;
- greater awareness of cost compared to benefits;
- costs of curbing emissions are immediate, while benefits take longer to realise;
- no agreed framework for an equitable sharing of costs.¹

Until these perceptions are changed, for at least a substantial number of the largest emitters of GHG, there is no prospect of stabilising the proportion of GHGs in the atmosphere.

The international challenge is, therefore, to change some or all of these perceptions, so that the international game is no longer represents a prisoner's dilemma. It is possible and, indeed essential, to do so.

There are encouraging signs that perceptions have already begun to change, so that stabilising GHGs in the atmosphere has become feasible, though very far from assured.

¹ Some of these are cited in Todd Sandler (2004) *Global Collective Action*, Chapter 10.

There is a growing consensus that a failure to stabilise the proportion of GHGs in the atmosphere could have catastrophic consequences for our descendants. This has already been sufficient to change the balance of perceptions for some governments. Several significant developed economies have decided that it is no longer in their interests to hope to free-ride on the potential action of others.

Accordingly, the international game to stabilise the proportion of GHGs in the atmosphere is no longer a simple prisoner's dilemma.

Although there is still no agreed framework for sharing the costs of reducing emissions, there is growing confidence that most governments are willing to make some contribution to the task.

A well-designed ETS for Australia can underpin these positive trends in several ways, including:

- by precedent: demonstrating that the short-term political cost is not fatal;
- by strengthening the incentive for developing and deploying new technology, by setting a clear value for GHG saving technology which allows sales of permits and reduces the cost of cutting emissions;
- by strengthening the incentive for others to set emissions budgets: if the ETS is designed to leverage the benefits of commitments by others to limit emissions.

In these ways, an ETS can continue to change the perceived balance of costs and benefits for all economies. By setting an early and positive example, Australia can accelerate international cooperation to stabilise the proportion of GHGs in the atmosphere.

Emissions budgets

The report states, correctly, that it is not sufficient to set targets for cuts in emissions from a starting date to a future date. It is essential to back such a target with a trajectory for the decline during the intervening period. That makes it possible to define a budget for the total emissions which will be added to the atmosphere.

Time-stamps

The ultimate addition to GHGs in the atmosphere will not be affected by the rate at which this budget is used up during the period. But it is unrealistic to expect very large cuts in any brief period, so it is desirable to adopt trajectories which are smooth. Therefore, it is essential to ensure that the budget is used up at a reasonably smooth rate. If too much is used too early, then there may be irresistible pressure to abandon it in future.

It is useful to auction some permits which can be used in future years of the period covered by the trajectory in order to establish a forward market and forward price. However, to avoid, premature overuse of permits, they need to be 'time-stamped',

indicating the earliest date at which they can be used. The report, as far as I can see, does not make this point explicitly. It should do so.

At the same time, as proposed in the report, there should be no limit on how long a permit is held before it is used. The issuing authority or any economic agent should be able to retain permits rather than use them as soon as their earliest allowed use. The existence of a stock of permits which are ready for use will help limit fluctuations in the price of permits.

The report recommends the option indefinite holding of permits. That is described as 'hoarding'. That term has very negative connotations of speculation; it should be eschewed in favour of allowing 'investment' in permits to emit, which can be used at any time after their stamped date.

Trajectories

The report draws attention to the need to balance predictability and flexibility. It recommends, appropriately, that a long-term trajectory, for up 40 years be adopted at the outset. In order to promote sound decision-making by economic agents, it is essential that any variation on the long-term trajectory be limited and implemented with adequate warning.

To create an unambiguous incentive for the development and adoption of emissions-saving technology, it would also be desirable to announce that the trajectory would only be altered in the direction of reducing emissions permitted in any future year. As recommended in the report, any short-term distress can be dealt with by policies which stabilise the price of permits and allow economic agents to obtain additional permits from the market and/or the independent issuing authority.

It is appropriate to indicate at the outset to foreshadow potential tightening of the trajectory (and therefore the budget) for emissions. The circumstances in which that might happen should also be explained as well as it is possible to do so, given the many uncertainties which will remain at the time the initial Australia trajectory is adopted.

At the same time, it is not necessary to limit the number of potential trajectories. There are several reasons to maximise flexibility, while maintaining the principle that changes in trajectory will always be in one direction, limited in extent and introduced after an adequate warning period.

The initial trajectory

The interim report noted that it is quite unlikely that reducing emissions by Australia by 60 per cent by 2050 will be more than what is needed as our contribution to stabilising the proportion of GHGs in the atmosphere.

It seems appropriate to adopt that target for 2050. Therefore, that would be an appropriate end-point for the initial trajectory to be adopted. After allowing for some headroom to 2012, the end of the Kyoto commitment, the trajectory could be set as a

straight line to the 2050 target. There is not enough knowledge of the options available to reduce emissions to adopt a more complex option.

Changing the trajectory

The report suggests that four possible trajectories be foreshadowed. I believe that is an unnecessary constraint.

Firstly, as additional evidence emerges, it may be essential to tighten the budget very substantially in future on the basis of evidence of climate change.

It would be counterproductive to announce any potential trajectory implying very large cuts right now.

In practice, cuts in the order of (say) 90 per cent will only be adopted if:

- there is far greater certainty about the likely extent and cost of climate change;
- and/or the availability of technology to make cuts in emissions much less costly.

Ruling out very deep cuts at the outset, by saying only four trajectories will be considered, is closing an option needlessly. It would also weaken the incentive to develop and adopt new technology.

There is a second argument for retaining flexibility. The option of making several small changes to the budget and trajectory can optimise the potential for encouraging other economies to adopt progressively tighter emissions budgets.

The report notes that Australia should foreshadow its willingness to tighten its emissions budget in response to an international agreement of adequate quality.

Given our knowledge of the global climate, it is not easy to define what constitutes an adequate international agreement. For the reasons cited in the interim report, there is a high risk of no international agreement by the deadline set in Bali. There is an even higher risk of a manifestly inadequate agreement, which will need to be renegotiated in due course.

We do not need to tie Australian strategy too tightly to the UN process. It should be possible to adopt a strategy that rewards any appreciable (and verifiable) limits on emissions by developing economies. Doing so can magnify the benefit of the cost incurred by developing economies limiting their emissions.

Rewarding developing economies

Acting alone, Australia cannot expect (or afford) to make a significant difference to the cost-benefit perceptions for any developing economy. However, if the EU and the US also adopted a calibrated policy of rewarding efforts by China and others, then the

nature of the international game of stabilise the proportion of GHGs in the atmosphere can be changed radically.²

Such a cost-sharing strategy can magnify, quite significantly, the benefit in terms of stabilising GHGs for any cut in emissions by developing economies. It can serve to tilt the balance significantly against the temptation to free-ride.

Conversely, there is reason to believe that in the absence of such a cost-sharing strategy, the politics of jealousy could delay dangerously the transformation of perceptions. If any large developing economy retains the perception that its optimal strategy is to attempt to free-ride, then we may fail to stabilise the proportion of GHGs in the atmosphere.

Against this background, the most important contribution by Australia to the overall challenge is to design its ETS in a way which can reward efforts by developing economies to limit their emissions and to encourage other developed economies to adopt such a cost-sharing strategy.

If Australia is be prepared to tighten its emissions budget in response to efforts by others, that may require quite a few changes over time. But each of these variations in the trajectory would be small and, as recommended in the report, be implemented with adequate warning.

A graduated reward-based strategy is not inconsistent with the report's current recommendation that Australia indicate a willingness to tighten its emissions budget in response to an international agreement. Such an agreement would be one point along the possible range of efforts by developing economies to limit their emissions.

Stabilising the price of emissions permits

The report warns that a smooth trajectory for reducing annual emissions does not guarantee a stable price for permits to emit at a particular time.

The report envisages the creation of the deepest possible market for permits to emit at various times as the main means to limit fluctuations in price. The existence of an international market for permission to emit would be very helpful.

As explained in the report, there are many factors which will influence the pace at which an international market comes into existence. Therefore, it is desirable as proposed in the report, to have domestic options to limit fluctuations.

One of the options canvassed is for the independent issuing authority to be able to lend a carefully limited amount of permits, on appropriate terms, to an economic agent which is 'caught short' of permits essential to its survival. I believe it is possible to avoid recourse to this option.

² As noted in my comments on the Interim Report, a credible framework for cost-sharing can transform the international game of stabilising the proportion of GHGs in the atmosphere to one in which free-riding is no longer the dominant strategy for rational governments. See Sandler (2004) pp 90-98.

Creating a forward market

Economic agents are expected to plan for the availability of any of their inputs. As long as there is an adequate market for permits, there is no reason why a failure to plan for the right to emit GHGs should be less risky than the failure to plan other aspects of their operations.

Measures other than a lender of last resort can create a forward market for permits, allowing any prudent economic agents to acquire permits well ahead of when they will be needed to sustain operations.

Part of the solution is the option to invest in permits, rather than to use them as soon as their time-stamp permits. Another part of the solution is the proposed sale of permits to emit in future years.

A further degree of assurance that permits are available at a reasonable predictable price is for the independent issuing authority to possess a stock of permits which can be sold for immediate use.

At the initiation of the ETS, the independent issuing authority can be allocated some amount of permits which are ready for use. Some percentage (probably well under 10 per cent) of the amount of permits available for 2010 should be adequate to create a significant potential to influence the price.

The authority would then be expected to use this stock to avoid sudden upsurges in prices. The permits can be sold into the market in any year, so sales should stabilise the entire price curve as well as the spot price of permits.

The independent issuing authority should also be expected to return their holdings of permits to the original level within a limited period. If the authority is a good judge of when it should buy or sell permits in order to dampen price fluctuations, then its stabilisation efforts should prove profitable.

The availability of such a mechanism should also remove the need for any floor or ceiling price.

Perhaps more significantly, providing for a stock of permits to be used to used for stabilisation should remove the need for the independent issuing authority to lend permits. The authority will have many important responsibilities requiring a range of skills. It should not be necessary for it to have expertise in assessing credit-worthiness.

As explained in the report, there are many reasons to create an independent authority to manage the ETS. But the authority need not be, and should not be, called a bank.

Other economic agents, including banks, should be free to lend or borrow permits if they wish.

Discouraging speculation

To safeguard the sustainability of the ETS, it would be helpful to limit fear of 'speculators'.

In the current discussion of trading water rights, there are calls to limit who can buy or sell them in order to curb speculation

(see *Govt rules speculators out of water trading*, news item on ABC <http://www.abc.net.au/news/stories/2008/04/15/2217571.htm>)

Cornering the market for permits can be avoided by not selling all of the permits to emit in future years as soon as the initial trajectory is announced. Retaining some of the permits for future emissions is, in any case, needed to allow for tightening the emissions budget under certain circumstances.

If the independent issuing authority has adequate discretion about the timing of the sale of permits with any time-stamp, then it will be risky to speculate on the possibility of forcing sharp price changes. The considerable uncertainty about future technology will add to the risks of speculation.

For these reasons, it should not be necessary to limit which agents can buy or sell permits to emit.

Other comments

Acting alone?

It is no longer useful to reiterate that Australia should not act alone. The EU has already acted, albeit in a flawed way and there is a very high probability of significant action by the United States after 2008. It is more productive to assure decision-makers that Australia will not be acting alone.

At the same time, a well designed strategy for reducing our emissions, including by means of an ETS, can have a significant effect on the willingness of others to act sooner rather than later. It is also possible for Australia's strategy to influence the magnitude and effectiveness of the efforts of others.

It is also important to emphasise that there is no need to wait for an international agreement. As proposed in the report, Australia can still influence the nature of any future agreement by the way it responds to efforts by others.

As noted above, our efforts should be able to respond to the efforts of others, whether or not they are taken in the context of an international agreement.

It is possible to be pessimistic about a 'comprehensive international agreement' while being optimistic about the willingness of some significant developing economies to respond unilaterally to incentives to act.

Coverage and offsets

It would be useful to state the proportion of Australian emissions expected to be included from the outset and the additional proportion that would be covered by the inclusion of (all or parts) of forestry and agriculture.

I share the report's caution about offset. Unless reductions in (say) clearing of forests in other economies are real, the ETS could be rorted.