

THE AUSTRALIAN GREENHOUSE STORY

(In 7 papers)

Paper No. 5. **More Problems**

CO₂, although not toxic in the ordinary sense of that word, is at least as lethal if large quantities are involved. Geosequestration (CCS) as currently planned, is based on the attempted 'storage' of quantities of CO₂ and for periods way beyond anything humans have attempted before. We will, in effect be 'playing it by ear' because of our lack of knowledge of what is involved at this level. The sooner we are forced to introduce CCS, the riskier it is likely to be. Both leakages and blowouts must be anticipated and, if this is the case, can CCS continue to survive in the face of a growing public perception that its use puts lives at risk?

This, after all, is exactly the same predicament as occurred in the United States in respect of nuclear power plants. Nuclear power stations in the US were never notably dangerous, to the extent Chernobyl was dangerous. In any event, the use of nuclear energy in America, was becoming progressively safer so that even if older nuclear power stations required upgrading or replacement, newer facilities were as safe as could legitimately be expected. Nevertheless, it took only a relative handful of 'negative' occurrences, a few books on the subject and the odd film or so to change public perception of the entire industry.

As a result the US, which introduced the world to nuclear energy in 1945 and its subsequent peaceful adaptation ceased construction of new nuclear power stations which still applies. The same forces applied in Australia in respect of geosequestration could just as easily produce the same sort of result. If so, we ought to reflect now upon just how little 'bad publicity' is needed to achieve such sizeable results. It takes very little to change public opinion particularly in



respect of issues that are highly technical and where there is a possibility of danger to lives however remote that may appear to be.

What is also important to realise is that whatever it takes to change public opinion is capable of occurring at any time including some time well after Australia has become heavily dependent on geosequestration in trying to keep up with its Kyoto target emission levels. So its adoption as our 'silver bullet' is almost certain (with apologies for the mixed metaphors) to produce the proverbial sword of Damocles, hanging over our collective heads and for a long time to come. In short, the use of CCS to the massive extent being planned must create uncertainty in industry. Business becomes concerned that if it relies on energy that needs to bury its waste to remain viable, what will happen if and when the burying of that waste, for whatever reason, suddenly becomes impossible.

So this paper argues that although CCS cannot be disregarded as a solution, we would be foolish to proceed on the basis that it alone provides all, or even the majority, of the answers. Such an approach would expose Australia in world markets to a range of countervailing tariffs to our considerable disadvantage. It would leave us in a totally

defenceless economic position in the event that a decade or so down the track, public pressure forces its abandonment on a permanent basis and consequently leaves Australia without the ability to get anywhere near its Kyoto emission targets.

In any event CCS on its own (or anything like it) is not sufficient either to reduce the level of GHG or even to stabilize it. The cost of CCS will increase as we attempt to extract and bury the maximum quantity of CO₂. The likelihood is therefore that at some point short of 100% clean coal the cost will become prohibitive. The process in any event is really only applicable to stationary energy production and then only in circumstances where the quantity of GHG being emitted justifies the cost. The conclusion that other significant means for GHG reduction must be implemented in addition to CCS therefore seems inescapable.

It is also not the intention of this paper to labour the issue that burying CO₂ can be dangerous. However we need to realise that problems arise when we get to believing that past experience in the small scale underground storage of CO₂ (such as at Seipol) for short terms makes us masters of the art when applied to massive quantities and centuries of storage. It is likely, judged by previous engineering disasters, to be those issues we haven't so far experienced or fully considered that are most likely to cause the eventual problems. After all, engineering

projects are rarely, if ever, undertaken when the engineers advise that the risk to human life is high. In the case of Chernobyl and Longford, (for example), there is no doubt engineers would have advised government that the installations would be safe. What brought about the subsequent disasters were occurrences that had not been fully considered.

Of more immediate concern is the issue of what geosequestration is likely to cost and when and where the cost burden is most likely to fall. Equally there is an issue of the extent to which governments intend to foot the bill and, if it does so, the wrong message that would be sent to the public if electricity cost increases were 'avoided' by tax funded government payments.

So the problems continue to mount. In a paper, soon to be released on this website and previously circulated to both sides of Federal politics the McKean & Park Future Law Team argued for the establishment of an Energy Authority capable of providing answers that could be relied on by everyone. Other countries, notably the UK have benefited by the establishment of such an Authority and we see no reason why Australia would not also be better off by adopting this approach. At least it would make whatever we do in this area, safer.

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