

21 December 2007

The Secretariat  
Garnaut Climate Change Review  
Level 2  
1 Treasury Place  
MELBOURNE VIC 3002

Dear Sir

## **SUBMISSION ON R & D OF LOW EMISSIONS ENERGY TECHNOLOGIES**

For over 30 years, ResourcesLaw International has advised a wide range of public and private sector clients on policy and strategic issues relating to energy sector trade and investment. In current times, we are particularly involved in advising on R & D and commercialisation of low emissions energy technologies and on the development of low emissions energy projects.

The low emissions energy technologies with which we are most familiar are solar, LNG, coal seam methane (CSM), carbon capture and storage (CCS), coal liquefaction and other clean coal technologies.

We make the following submission:

1. Whilst appreciating the economic rationale, we do not believe it is particularly helpful for the Stern Report or others to depict the climate change problem as "market failure." Climate change is better understood as a global environmental problem that transcends markets and is of such importance as to warrant immediate regulatory responses by governments around the world. These regulatory responses should involve both economic and technical regulation but not intervention in the energy market itself.
2. The power of markets should nonetheless be harnessed in striving for the optimal regulatory response. In this regard, we warmly support the approach of the Review in seeking to design an optimal "cap and trade" greenhouse gas emissions trading scheme.
3. Carbon markets do not create themselves. Unlike commodity markets, they are markets in regulatory risk that depend on a secure and predictable regulatory umbrella under which fully informed transactions can take place. The task of carbon market design must start with a regulatory framework that only governments can impose. Markets in regulatory risk are unique in depending for their efficacy on the constancy of government intervention, admittedly a novel challenge for all concerned.

4. In our opinion, the failure of both producing and consuming countries to impose appropriate environmental regulation on the fossil fuel industry and on the use of fossil fuels has contributed to lower market prices for fossil fuels over the past 30 years than would otherwise be the case. This has reduced the incentive for investors to invest in the energy sector. Low market prices have resulted in energy sector investment failing to keep up with global energy demand growth and investment in new technologies lagging behind this sub-optimal level of energy sector investment.
5. It has now become an urgent priority for all countries to, amongst other things, incentivise investment in low emissions energy technologies. Any shift in climate change policy must, however, accommodate energy security concerns. In a recent paper, we suggested there are three essential reform elements in addressing the dual challenge of energy security and climate change:

*"The essential reform elements are, first, allowing energy markets to function freely and transparently (so as to dampen demand in the most efficient and equitable way); secondly, introducing and fostering markets for carbon emissions in order to reduce uncertainty in the making of investment decisions (this could be either a domestic market or participation in a regional market like the EU); and, thirdly, implementing domestic energy sector reforms to remove investment barriers, promote competition and encourage investment in climate-friendly energy technologies."*

6. The future prospect that a low emissions energy technology will, if it is brought to the point of successful commercialisation, produce an energy service which attracts a higher price in the market place than a comparable energy service derived from a high emissions energy technology, is not greatly material in inducing present-day investment in R & D. We therefore agree with Stern's conclusion (Chapter 16 of the report) that carbon pricing alone will not be sufficient to reduce emissions on the scale and pace required.
7. Technology development cannot wait for robust global carbon pricing. If emissions are to be delinked from global economic growth, the time taken to develop low emissions energy technologies must be collapsed. Long term technical solutions need to be supported by short term practical initiatives.
8. The priority focus of R & D should be on those technologies that are likely to generate the most emissions reductions. These are likely to include advanced coal cleaning technologies and soil carbonisation and other sequestration techniques that will enhance agricultural production. However, it should be left to those with relevant know-how in the energy market place to decide on the priorities.
9. It is no exaggeration to suggest (see page 355 of the Stern Report) that new technologies can easily fall into a "valley of death". The main question is what is the best form of incentive to encourage investors to sustain their efforts in the direction of innovative low emissions technologies? We can suggest no better incentive than an expanded program of accelerated tax deductions, in

much the same way as accelerated depreciation is offered to investors in pioneer industries. This incentive will trigger an immediate response in equity markets which will then look more seriously at the range of available opportunities to invest in low emissions energy technologies.

10. Accelerated tax deductions are a fast-track solution that is well suited for Australia with its efficient equity markets and ample funds looking for suitable investments. Accelerated tax deductions will provide the impetus for public-private partnerships on a broad scale. They will allow the market place to filter out the breakthrough technologies and to select the companies that have the best chances of bringing the technologies to market. Accelerated deductions involve a drain on the public purse but they defer the burden.
11. Because many innovators lack the revenue streams to be able to take advantage of tax deductions, there is also a need for a mechanism to marshal the funds of passive investors who are in a better position to support the innovation process. There is an overwhelming case for "pass-through" schemes where taxpayers club together to mobilise the large amounts of funding required for energy R & D and other stages of low emissions technology commercialisation. With the right incentives and the right marshalling mechanism, markets in energy R & D can be quickly established.
12. Accelerated tax deductions and marshalling of funds via pass-through schemes also carry the advantage that they will enable Australia to independently accelerate the development of low emissions energy technologies without waiting for international solutions to emerge or global carbon markets to develop.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Robert Pritchard', written in a cursive style.

Robert Pritchard