Exigency

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The Secretary
Joint Select Committee on
Australia's Clean Energy Future Legislation
PO Box 6100
Parliament House
Canberra ACT 2600

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Exigency was established in 2003. It is an independent energy and carbon market advisory firm, serving clients on Energy and Greenhouse Strategy as well as providing advice and project support in the delivery of sustainable and low carbon intensity infrastructure (www.exigency.com.au).

Exigency has made a number of submissions on climate policy in its own right including on Renewable Energy legislation and the previously proposed Carbon Pollution Reduction Scheme. These submissions have a consistent theme: the integrity and effectiveness of climate policies require the application of sound market principles, coupled with well-considered market regulation.

Key Points

- The Carbon Pricing Mechanism runs counter to the international evidence in favour of incentive schemes and against penalty schemes
- The proposed scheme will penalise Australian manufacturers whilst paying incentives to their international competitors
- Electricity Prices could rise more than 6 c/kWh relative to current prices without changing the carbon intensity of the generation mix
- The lack of key energy market reforms restricts substitution or other relief from energy price imposts
- Subsidies for renewables must introduce a location-specific carbon price to avoid inefficient capital allocation and/or spinning reserve costs of displaced generating capacity
- Buy-outs of fossil generation capacity might lead to demand being met from existing, high emissions intensity capacity
- Modelling of international abatement credits needs to factor price impacts of "disallowed" credits and additionality risk (ie payment with no environmental gain)

Penalty Schemes versus Incentive Schemes

Market-based climate policies can be classified into two broad categories:

- Penalty-based, in which a price or a volume limit is applied to the release of greenhouse gases with the intent of initiating an economic response to reduce emissions.

- Incentive-based, in which an economic reward is provided in return for a reduction in greenhouse gases - an example being the NSW Greenhouse Gas Abatement Scheme

There continues to be considerable confusion in the media, via opinion pieces and reportage from Canberra as to the difference between a carbon permit and a carbon credit. The former is an emissions right and is applied as a penalty, whilst the latter is an amount of certified abatement that is applied as an incentive. Certain prescribed "credits" may be submitted in lieu of a permit in penalty schemes.

The Carbon Pricing Mechanism, to be established through the Clean Energy Bill 2011, is based on the sale of emissions rights or "permits" and is a penalty scheme, commencing with a fixed permit price and transitioning to a "cap and trade" scheme with a floating, collared, price from 2015.

Emissions rights and Abatement Credits are typically expressed in the form of a certificate representing 1 tonne of CO2-equivalent. The term "Permit" is commonly misapplied to abatement credits. This may be the cause of some ignorance on how the various carbon policies work – and mask a fundamental paradox at the core of the Clean Energy Bill.

This may also go part way to explaining why the Government claims that "putting a price on carbon" (i.e. applying a penalty to carbon "pollution") is "recognised by economic experts around the world to be the most environmentally effective and cheapest way to cut pollution"[1].

Rather, economists have tended to argue that "market mechanisms" and/or "emissions trading schemes" provide the most environmentally effective and cheapest way to reduce emissions, without differentiating between penalty and incentive schemes.

In describing Emissions Trading Schemes in its report: Carbon Emissions Policies in Key Economies (May 2011), the Productivity Commission concluded:

> "Emissions trading schemes were found to be relatively cost effective, while policies encouraging small-scale renewable generation and biofuels have generated little abatement for substantially higher cost".

In so doing, the Productivity Commission used the term "emissions trading schemes" to describe incentive schemes (specifically the NSW Greenhouse Gas Abatement Scheme) as well as penalty schemes (such as the European ETS).

Contrary to the Government's claims, our own research lends weight to the view that incentive schemes, such as the Clean Development Mechanism (CDM) and the Chicago Climate Exchange achieve greater environmental outcomes, at lower cost, than the penalty based alternatives. Indeed, the European ETS depends upon carbon abatement purchased through the CDM to meet its Kyoto Greenhouse Gas commitments.

Despite this, neither the CDM, nor the Chicago Climate Exchange was assessed by the Productivity Commission in its review of Carbon Emissions Policies in Key Economies (May 2011).

[1] Clean Energy Future. What a carbon price means for you.

Incentive schemes are not without problems[2]. However, at a minimum, they are more transparent, carry less regulatory burden and are more conducive to reform than their penalty based counterparts. By contrast, penalty schemes such as the EU ETS pose substantial challenges in even assessing whether and to what extent they have been causal in achieving environmental outcomes.

Ironically, Treasury appears to support the view that incentive schemes are superior in cost and effectiveness, via its modelling indicating that international abatement credits will deliver two thirds of the environmental benefits of the Clean Energy Bill by 2020 whilst reducing the overall cost of the scheme.

Key Design Considerations for Effective Carbon Policy

A well-designed carbon policy will allocate capital efficiently to deliver the maximum amount of emissions reductions at the least cost. However, the evidence in support of penalty-based schemes is not strong. The Sandbag Report (August 2010) concluded that the European Cap and Trade scheme (the European ETS) will deliver emissions reductions of approximately 30 million tonnes in the 5 year period ending in 2012 - equivalent to 0.3% of Europe's emissions over that time. This is due, in large part, to the oversupply of permits, allowing facilities in covered sectors to operate with minimal carbon constraints.

Further, it is far from clear that such a penalty scheme would be efficient or effective when applied to the Australian economy:

1. 45% of Australia's emissions covered by the Carbon Pricing Mechanism come from electricity generation.
2. The requirements, for policy effectiveness, of high competitive intensity at the energy producer level and/or the capacity to substitute or reduce at the consumer level are not met.
3. The National Electricity Market, which accounts for the majority of Australia's electricity generation, is designed to pass on the short run marginal cost of the marginal generator, which will be increased by the cost of carbon permits.
4. We would expect that carbon prices of over $60 per tonne on electricity generation would be passed on to consumers with little or no change in the dispatch of fossil fuelled generation. This may have already been addressed by Treasury, but if not, could readily be confirmed via Roam Consulting, its energy market modeller.
5. New baseload generation capacity is likely to be gas-fired with our without a carbon price, due to the loss of appetite amongst banks for funding coal-fired generation.
6. The withdrawal of fossil fired baseload generation through a buy-back scheme could lead to demand being met by other "dirty" generators.
7. The requirement to obtain permit cover over the long term to make a project bankable will inhibit new entrant power generators and favour incumbents.

[2] A Realistic Policy on International Carbon Offsets; Wara and Victor, Stanford University Program on Energy and Sustainable Development, April 2008.

8. Vertical integration and concentration of Retailers will limit consumer choice in response to a carbon price.

9. Regulatory failures will limit consumer capacity to initiate demand side measures such as low-intensity distributed generation or to access and respond to real-time consumption data.

10. The price elasticity of demand for electricity makes penalty based schemes in which the cost is passed to consumers every 2 or 3 months is a very blunt instrument for change and any compensation does not match to that timetable.

11. Effective consumer responses for essential services, such as AGL's South Australia Summer Electricity Peak Reduction Programme, and Melbourne Water's "Target 155" have been achieved on an entirely voluntary basis, in the absence of a price signal.

12. Reallocation of sales proceeds is an inherent feature of Permit schemes and should be factored into any assessment of scheme efficiency and effectiveness, rather than a narrow assessment of the impact of the "carbon price".

The above suggests to us that the Carbon Pricing Mechanism is unlikely to be the best means of reducing the level of Australia's greenhouse emissions.

To mitigate these inefficiencies and undesirable consequences, the Carbon Pricing Mechanism could be scaled back so as to apply to marginal producer emissions above an efficient carbon intensity benchmark. This would limit deadweight costs and mitigate the impost on the manufacturing sector which is already struggling under the "two-speed" economy. However, there appears to be little acknowledgment of these issues beyond industries which are deemed to be Emissions Intensive and Trade Exposed.

On the other hand, there are a number of arguments in favour of incentive-based market schemes:

1. The world's two largest carbon markets (Chicago Climate Exchange and Clean Development Mechanism) are incentive schemes, have had greater environmental impact, at lower cost, than the third largest carbon market – the penalty-based European ETS.

2. It is much clearer how much abatement has been achieved, by whom and at what cost compared with penalty schemes.

3. By focusing on the emissions savings "delta" rather than the totality of a facility's emissions, the deadweight costs and the amount of "carbon dollars" flowing through the economy are smaller and potentially less distortionary.

4. They align more readily with voluntary action and the behavioural response to climate change.

5. The market determines both the price at which carbon reductions will occur and the volumes of carbon reduction that compared with penalty schemes, for which either the volume or the price is set by regulation and/or political considerations.

Specific Comments on the Clean Energy Bill 2011 Exposure Draft

In making these comments, we have assumed that the "Heisenberg Clause" (Clean Energy Bill 2011 Exposure Draft Section 307, Alternative Constitutional Basis) correctly confers the power on the

Commonwealth to create and sell an environmental property right and does not require a further referral of powers from the States.

Broadly, the Carbon Pricing Mechanism, to be established through the Clean Energy Bill, should be seen as a hybrid regulatory/market mechanism aimed at managing carbon prices through a "collar" from 2015. In practice, this will require considerable, expert, regulatory and market oversight capabilities.

To illustrate this, a price cap can be managed by issuing more permits – as long as the carbon account is balanced by carbon credits, or subsequent permit buy-backs.

Similarly, a price floor could be managed by buying back permits to increase scarcity or reducing the scope of "recognised" abatement credits. However, it will be difficult to implement such measures without creating arbitrage in the international carbon markets.

It should also be noted that, whereas international credits typically trade at a discount to European ETS permit prices, the market is currently dominated by "industrial gases" credits, which the Government has indicated will not be acceptable in lieu of Australian permits when the Carbon Pricing Mechanism floats in 2015.

By inference, it is far from clear that international credits deemed acceptable under the Carbon Pricing Mechanism will trade at a discount to the Australian permit price from 2015.

The Fundamental Paradox of the Carbon Pricing Mechanism

We note in the announcements accompanying the Multiparty Climate Committee agreement and associated Treasury Modelling that two thirds of the 2020 emissions reduction target (ca 100million tonnes of CO2-e) will be sourced internationally.

We anticipate that the vast majority of this international abatement will be achieved by purchase of Certified Emissions Reductions through the Clean Development Mechanism.

Briefly, the CDM is an economy wide incentive scheme, provide abatement credits from projects in non-Annex B "Developing Countries". The abatement credits are drawn from the reduction or removal of emissions arising from: industrial gases (eg HFCs), cement manufacture, coal bed methane, landfill gases, supply side energy efficiency, demand side energy efficiency, renewable generation, afforestation and reforestation.

The CDM was ratified under Article 12 of the Kyoto Protocol in December 1997, but grew progressively from the signing of the Marrakesh Accord (November 2001).

At that stage (2002), the combined GDPs of three of the BRIC economies (Brazil, India & China)[3] were a little under six times that of Australia. By 2016, the first full year of the Carbon Pricing Mechanism under a "floating" permit price, this ratio is forecast to be just over 10 times. Together, these three BRIC economies account for over 70% of CDM pipeline projects[4].

That is, with the shift in the economic centre of gravity away from the Developed Countries and towards the BRIC economies in particular, the CDM, whilst having been a reasonably effective carbon abatement

[3] IMF World Energy Outlook, April 2011, USD nominal.
[4] http://cd4cdm.org/

mechanism, appears increasingly anachronistic as a "crutch" for carbon policies in the "developed" economies.

We find it paradoxical, and disadvantageous from the point of view of Australia's international competitiveness, that the proposed Carbon Pricing Mechanism will apply penalties (either directly through permits, or indirectly, through increased electricity and gas prices) to Australian businesses, whilst their competitors in the BRIC economies are paid to reduce their emissions.

Potential for Distortion of the Clean Energy Market

The $13 billion of funds allocated to the development of the clean energy market has the potential to cause great damage to this developing industry. In addition to the need to strike a delicate balance between standing in place of the capital markets on the one hand, and becoming a lender of last resort to "snake-oil" schemes on the other, there needs to be reinvigoration of currently stalled COAG energy market reforms. Key reforms would include:

1. A market-wide information strategy designed to publish the requisite information, in a suitable form, to foster innovation and the delivery of energy market solutions in preference to the status quo and/or overly prescriptive regulatory intervention.
2. Removal of restrictions on grid connection of renewable and distributed generation schemes (as has already happened in NZ and the UK, with the most basic "smart grid" technologies).
3. Introduction of a locational signal into renewables subsidies, reflecting the carbon intensity of the generation they displace, and potentially, the requirement for "capacity payments" to fund the maintenance of baseload generators as spinning reserve during period of low overall demand. This would replace the indiscriminate MWh-based subsidy that is currently applied.

Without reforms such as this, carbon policy effectiveness will be severely constrained and productivity will be compromised.

In conclusion, we are of the view that the current package has a number of inherent inefficiencies and undesirable consequences. Further, it appears to have been selected from a narrow range of penalty based schemes with insufficient consideration of the alternatives, and despite the ready availability of evidence in support of these alternatives.

Exigency would be pleased to address Senate Members in person if appropriate, to expand on the matters raised here.

Yours Sincerely

Stuart Allinson

Adrian Palmer