“Financial Services for Managing Risk: Climate Change & Carbon Trading”

Background on TRUenergy

TRUenergy is one of Australia’s largest integrated energy businesses. With approximately 1.2 million customer accounts, TRUenergy supplies electricity and gas to residential and business customers across Victoria, South Australia, New South Wales, the ACT, Tasmania and Queensland.

TRUenergy’s $5 billion portfolio of assets includes:

- Yallourn power station and adjacent mine in the Latrobe Valley (1480MW)
- Hallett power station (180MW) in South Australia
- A master hedge agreement with Ecogen that delivers dispatch rights to electricity from Newport and Jeeralang power stations in Victoria (966MW)
- Iona gas storage facility near Port Campbell in Victoria, and
- A number of long term agreements with upstream gas suppliers and renewable energy suppliers (including hydro, wind and biomass).

TRUenergy is constructing Australia’s most efficient gas-fired generation facility, near Wollongong, in NSW. When complete, the Tallawarra intermediate plant will emit 70% less emissions than traditional coal-fired power stations.

TRUenergy also has a 33 per cent interest in the SEAGas pipeline, a 685-kilometre natural gas transmission pipeline between Victoria and South Australia.

As a substantial investor, generator and retailer in the Australian energy sector, TRUenergy recognises its responsibility to take a lead role in the development and implementation of effective carbon reduction solutions. Based on the assumption that an effective national carbon trading scheme will be introduced, our Climate Change Strategy is our blueprint for achieving such reductions, committing us to emissions reductions across our portfolio by 60 per cent by 2050.

TRUenergy is a wholly-owned subsidiary of CLP Holdings, which is listed on the Hong Kong Stock Exchange and has a market capitalisation in the vicinity of A$22 billion. CLP operates a vertically integrated electricity generation, transmission, distribution and retail business in Hong Kong, and invests in electricity businesses in Australia, India, China, Taiwan and Thailand.
Introduction

In TRUenergy’s view a well designed national emissions trading scheme is the centerpiece of an effective, efficient climate change policy framework. Such a framework would deliver:

- **investor certainty ex ante** – by creating an explicit, market-based price of carbon across all sectors of the economy to determine the new entrant mix of energy generation and abatement technologies;
- **investor certainty ex post** – by adopting a compensation methodology that preserves the existing asset values of those most adversely affected by the introduction of a carbon charge;
- **incentives for research, development and demonstration** – by allocating public funds to the development of zero and low emission technologies with the greatest potential to reduce emissions at least cost in the long run;
- **support for low and zero emission technologies** – by implementing a national mechanism that facilitates commercialization and ultimately deployment in a timely manner; and
- **support for energy efficiency** - implementing non-price based, national mechanisms that addresses specific market failures.

Specific comments on the issues for stakeholder consideration are provided below.

**Building Effective Carbon Markets (3.2)**

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<td>Are there any institutional inhibitors to the emergence of an Australian ETS?</td>
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<td>Is permit price realisation and discovery best facilitated through the use of auctioning under an ETS?</td>
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<td>To what extent, and on what basis, might it be desirable that permits are not allocated via an auction system?</td>
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An appropriate mix of administered and auctioned permits is integral to an efficient, effective emissions trading scheme (ETS) design. A cap and trade system necessarily involves allocation of a specified amount of permits over a specified period of time. The primary functions of permit allocation, irrespective of the method(s), are to:

1. create scarcity in the market for permits, relative to business-as-usual emissions levels and therefore the incentive to deploy lower emission technologies;
2. facilitate the establishment of a competitive market for permits where the price reflects the marginal cost of abatement; and
3. minimise costs associated with policy uncertainty and regulatory change, such as sovereign risk, and maximise dynamic efficiency.

Notwithstanding the theoretical equivalence of administrative and auctioning methods of permit allocation (in terms of permit price outcomes), both methods have a practical role to play in fulfilling the primary functions of permit allocation.
Administered permits

Administered (free) permit allocation has an important role to play in minimising sovereign risk (and maximising dynamic efficiency).\(^1\)

Owners of existing carbon/energy intensive assets, by definition, valued carbon at zero at the time their investments were made. However the introduction of ETS (and a non-zero cost of carbon) will lower the expected returns over the life of these assets to varying degrees depending on their carbon/energy intensity.

Coal-fired electricity generation assets are among the most disproportionately, adversely affected in the economy with net losses estimated to be as high as $1- 2b, per asset (in net present value terms) in some cases.

Unanticipated and unmitigated net losses of this magnitude will have a severe impact on investment risk. Investors in future generation capacity would require a premium to returns to compensate them for the added sovereign risk associated with investment in such assets. Investors will, in effect, delay making investments until returns increase sufficiently to make the investment worthwhile. A delayed investment pathway (compared to that which would have occurred in the absence of the sovereign risk) is a departure from dynamic efficiency in the sector.

The economic significance of the electricity generation sector means that dynamic inefficiency in the sector will have a discernable economy-wide impact. The installed generation capacity of Australia, about 45000MW, is valued at about $40b with annual sales, about 195GWh, valued at about $12b. A reluctance to maintain and invest in low emission generation technology in the future will cost the community in the long term.

The National Emissions Trading Taskforce and the Task Group on Emissions Trading have acknowledged the suitability of free permit allocation as a policy tool for addressing disproportionately, adversely affected asset owners (and minimising sovereign risk). The objective of free permit allocation is to keep existing asset owners financially neutral. This implies only a partial free allocation of permits to disproportionately affected asset owners, as there will be some uplift in prices to reflect the introduction of a carbon price, and provide an ongoing incentive for low emissions technologies. It is important to note that this approach differs fundamentally from the approach adopted in Europe which allocated permits for over 90 per cent of generation sector emissions, without regard for any estimation of net losses to asset owners. This expected net loss (after uplift) can be estimated and free permits allocated to offset it, nullifying any additional sovereign risk from the introduction of ETS.

Contrary to what some Forum have participants asserted, this need not compromise incentives for abatement. Provided free permits are allocated efficiently (to avoid effectively subsidising emissions or creating market power in the permit market) the price permits will reflect the underlying marginal cost of abatement. Again contrary to what some Forum participants have asserted, the lack of upfront permit costs under free permit allocation does not alter the opportunity cost of permits, and therefore the incentive for liable parties to respond rationally to trading and direct abatement opportunities as soon as they face a liability under ETS).

Auctioned permits

Auctioned permit allocation has an important role to play in facilitating the establishment of a competitive market for permits (where price reflects the marginal cost of abatement).

New entrant investors in carbon/energy intensive assets have an incentive to factor the cost of carbon into investment decisions and price assets to adjust for the effect of carbon cost on expected returns. From an investor’s perspective the permit price effectively represents the cost of carbon. The wholesale price of energy (and the price of energy

\(^1\) Dynamic efficiency is concerned with social welfare (or allocative efficiency) over time.
intensive goods and services) will then increase to varying degrees depending on the permit price and the carbon intensity of the new entrant technologies over time.

Auctioning enhances permit market competitiveness by ensuring a degree of contestability, transparency and liquidity. Regular auctioning of permits by a central government authority achieves this by eliminating any potential for temporary barriers to entry in the permit market. Permit price discovery is enabled automatically as a result of a well designed auction process. If policy-makers consider early, permit price signals to be desirable for price discovery reasons, auctioning can commence before ETS commencement.

A by-product of auctioning is the creation of auction proceeds and policy-makers can use these funds for a range of beneficial purposes:

- address the distributional impact of ETS on other affected parties (such as low income families);
- provide subsidies for Research, Development & Demonstration in low emission technologies; and
- other public expenditures including the reduction of taxes in other sector of the economy.

An appropriate mix of both administrative and auctioning methods of permit allocation (as opposed to one or the other) is vital to enabling policy-makers to address sources of dynamic inefficiency in the long term and the potential for permit market inefficiency in the short term.

**Questions for consideration**

What features of an ETS might impede the emergence of forward markets?

Is it possible to have strong and efficient forward markets with restrictions on the use of permits, such as limited banking and borrowing?

Fundamental to the emergence of a forward market is an ETS design that provides policy certainty together with an appropriate degree of in-built flexibility to address the inherent uncertainty associated with climate science and abatement technology.

The National Emissions Trading Taskforce and the Task Group on Emissions Trading have acknowledged the suitability of using a combination of firm annual caps for an initial period and a cap gateway beyond the initial period to balance the need for certainty and flexibility. The forward market that emerged from such an approach would also then reflect this balance, provided participants were unhindered in their ability to manage their positions in this market.

The ability to bank and borrow permits is integral to forward market efficiency (and therefore the delivery of least cost outcomes under ETS). In general market participants’ ability to minimise their expected emissions/abatement costs over time ought to be unhindered by government intervention/design rules.

However, a perverse incentive potentially exists in relation to unfettered borrowing of permits, which threatens the environmental integrity of the ETS if left unchecked. The ability to defer emissions liability into the future allows liable parties that become insolvent to avoid their residual emissions liability altogether.

Borrowing rules could however be developed to remove this perverse incentive without restricting borrowing. For example the bond concept could used, whereby liable parties wishing to borrow permits (based on the expectation that they can secure permits/abatement at lower cost in the future) would put up a bond at the prevailing permit price at the time of the borrowing. The bond would be held by the central government authority and then released back to the participant when the permit deficit is effectively paid back in the future. This approach preserves the incentive for legitimately motivated borrowing because liable parties can still create a surplus from borrowing.
3.3 Positioning Australia as a regional hub in the Asia Pacific Markets

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<td>How can governments help facilitate Australia becoming a regional hub in the Asia - Pacific Carbon Markets?</td>
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All other factors equal, the fact that ETS will commence first in Australia (relative to other countries in the region) places Australia in a relatively strong position to become a regional hub for carbon trading. Australia has some advantages, regionally, which add to the position:

- national greenhouse gas inventory with a large quantity of emissions (comparable only to Japan but Japan has not been in favour of an ETS);
- binding Kyoto commitments and the prospect of using foreign emissions credits to meet domestic reduction targets under ETS
- local experience from trading under the NSW Greenhouse Gas Abatement Scheme and the Federal Mandatory Renewable Energy Scheme; and
- partner in the Asia Pacific Partnership on Clean Development and Climate.