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Senate Select Committee on Climate Policy

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Senate Select Committee on Climate Policy

esaa welcomes the opportunity to provide comment to the Senate Select Committee on Climate Policy's inquiry into the choice of emissions trading as the central policy to reduce Australia's greenhouse gas emissions; the role of complementary measures; and whether the design of the Government's Carbon Pollution Reduction Scheme (CPRS) is appropriate to secure the right investment signals for the energy supply sector and ensure a smooth transition to a low emission economy.

In recognition of the threat uncertain climate change policies can have on energy sector investment, esaa has – since February 2004 – called for a single, national greenhouse gas emissions policy applying to the entire economy and including an emission reduction target for 2050. In February 2007, esaa became the first industry association to pro-actively advocate for the introduction of an emissions trading scheme (ETS) and also outlined eleven critical design features.

However, esaa cannot support the CPRS unless the following four issues are resolved:

- Adequately address the stranding of coal-fired generation assets. A measured transition to full auctioning (as proposed in most other schemes to date) would enable a greater volume of permits to be administratively allocated to affected generators to ensure there is no disproportionate loss of economic value on the sector's balance sheets;
- Commit to ten years of rolling scheme caps followed by a ten-year rolling gateway;
- Ensure there are no additional working capital requirements for liable entities from the operation of the CPRS including auctioning and taxation of permits; and
- Ensure retail price regulation is removed. Efficient prices are necessary to provide the appropriate signals for new investment and without full cost pass-through the viability of retailers and the entire supply industry is at risk.

esaa is the peak industry body for the stationary energy sector in Australia and represents the policy positions of the Chief Executives of 45 electricity and downstream natural gas businesses. These businesses own and operate more than $120 billion in assets, employ 49,000 people and contribute $14.5 billion directly to the nation's Gross Domestic Product.

esaa supports the development of a reliable and sustainable energy supply system, where greenhouse gas emissions reductions are achieved at least-cost through rational policy settings and measures that are national, long term and complementary to competitive market arrangements. This objective is most effectively achieved by implementing an efficient economy-wide national ETS as the primary emissions reduction policy. Climate change

measures beyond an ETS must be demonstrably complementary and result in cost beneficial outcomes.

The energy supply sector currently produces just under 35% of Australia's greenhouse gas emissions and will be significantly impacted by the introduction of an ETS. However, esaa considers that a well designed ETS is a critical measure for attracting new investment in low emissions technologies. A well designed ETS must be efficient, effective and equitable in the long-term and, importantly, must ensure a smooth and orderly economic transition in the short-medium term. Failure to ensure an orderly transition would have widespread and potentially long lasting adverse economic impacts.

The following submission sets out esaa's key design principles for an efficient and effective ETS and considers the role for complementary measures in delivering least-cost greenhouse gas emissions abatement. esaa's ETS design principles must be considered as a package and implemented in full to achieve abatement at least-cost and ensure a smooth transition to a low emission economy. The current design of the Carbon Pollution Reduction Scheme fails to address a number of these critical design features and esaa's support for the introduction of the CPRS is contingent on the Government addressing these concerns.

Emissions trading as the central policy to reduce carbon emissions

esaa has developed and refined a set of design principles to guide the development of an ETS that will enable Australia to meet its domestic targets and international obligations at least-cost. The principles recognise the need for wide scheme coverage to send appropriate price and investment signals to all existing and new participants; adequate recognition of the loss in asset values from the introduction of the ETS to promote future investment in the energy sector; certainty on key scheme parameters to secure investor confidence; access to international markets to secure least-cost abatement; full cost pass-through to consumers to encourage greater energy efficiency and maintain the viability of electricity markets; and adequate investment in the deployment, but also the research and development, of new technologies to lower the long-term cost of domestic emissions abatement.

esaa considers that an appropriately designed ETS can achieve all of these goals provided the following key principles and policy settings are satisfied:

1. Targets and timing

A single long-term, economy-wide, emissions abatement target should be established for 2050.

In view of the typical design life of 20 to 40 years for electricity sector assets, an abatement trajectory should be fixed by setting firm short-term targets of 10 years duration and medium-term indicative targets for an additional 10 years.

- The short-term targets should be set as soon as practical at a level that provides for a manageable economic transition and is informed by the availability of emissions reductions across covered sectors.

2. Coverage

The ETS should cover all significant greenhouse gas emitting sectors, sources and sinks, including the stationary energy, transport, industry and agriculture sectors.

- Any excluded sectors should face emissions constraints at least equal to the covered sectors through alternative policies.

3. Permit allocation

The ETS should have a measured transition to full auctioning to enable a sufficient number of permits to be administratively allocated (provided at no charge) to affected generators to ensure there is no disproportionate loss in economic value on the sector's balance sheets from the introduction of the ETS. A liquid forward market should be created through the allocation of future dated permits or equivalent means.

- Economically efficient compensation should be calculated on an asset by asset basis, by an independent regulator using a transparent methodology, on commencement of the ETS.

- Investments and/or contracts made in good faith under existing greenhouse gas abatement schemes to be transitioned into the ETS, or ended early, should be fully compensated.

- Any additional compensation or subsidies that may be provided to trade exposed energy intensive sectors should minimise distortions to the ETS market and impacts on other industries.

4. Auction design

Allocation of permits should be undertaken by auction at a national level based on a single national target, after the provision of transitional assistance to disproportionately impacted industries.

There should be no additional working capital requirements for liable entities from the operation of the CPRS and/or taxation of permits.

- A payment deferral facility should apply to both current and future vintages and be a permanent feature of the Scheme.

- Auctions should be held at regular intervals to minimise impacts on cash flow and be efficiently aligned with existing markets including the National Electricity Market.

5. Price caps

In the absence of a comprehensive international agreement, a price cap that can be paid in substitute for the surrender of permits should be established.

- The price cap should be set just above the expected marginal cost of abatement for a chosen trajectory and should not be a punitive charge.

- Payment at the price cap would serve as an equal form of compliance and should not be subject to a make-good provision.

- The price cap should be informed by, and be no lower than, the implied cost of carbon of any pre-existing state based schemes to be transitioned into the national emissions trading scheme.

6. Offsets and international linkages

To the extent that new credible low-cost abatement or sequestration opportunities arise (either domestically or internationally) these should be incorporated into the ETS.

Provided Australia is not disadvantaged by its participation, an Australian ETS should be linked (in some form) to complementary international schemes to lower the cost of abatement.

7. Cost transparency

Energy markets should be allowed to efficiently include the cost of carbon throughout the supply chain, free from regulatory inhibitors such as price controls. To the extent that assistance is required to ameliorate the impact of the ETS on affected consumer groups, this should be funded and provided directly by Government.

8. Institutional arrangements

The ETS should be administered by a regulator that is independent of the policy and rule making authorities. The ETS should be supported by efficient measurement and reporting arrangements, and an efficient exchange to facilitate low-cost, transparent transactions.

9. Research, development and deployment

Significant government support is required for the deployment but also the research and development of low emissions energy technologies including generation and demand side management.

10. Taxation

To maximise efficiency in emissions abatement, the tax system should not introduce distortions between purchasing permits and other options.

Taxation implications should be considered in the calculation and provision of transitional assistance.

Critical issues with the current Carbon Pollution Reduction Scheme design

esaa's design principles provide an overarching framework for the formulation of an efficient and robust ETS that will attract investment to the energy sector and facilitate an ongoing reduction in national emissions. The principles were designed as an integrated package based on good regulatory practice and industry and international experience. The Government's acceptance of some principles, but not others, seriously compromises the entire CPRS design.

There are four critical issues that are not adequately addressed in the Federal Government's current CPRS design. To ensure the security of supply and investor confidence in long-lived, capital-intensive assets, the CPRS needs to:

- Adequately address the stranding of coal-fired generation assets. A measured transition to full auctioning (as proposed in most other schemes to date) would enable a greater volume of permits to be administratively allocated to affected generators to ensure there is no disproportionate loss of economic value on the sector's balance sheets or a rise in costs to such a level as to compromise both the ability to refinance, and/ or re-invest in existing power plant;

- Commit to ten year years of rolling scheme caps followed by a ten-year rolling gateway;

- Ensure there are no additional working capital requirements for liable entities from the operation of the CPRS including taxation and auctioning; and

- Ensure retail price regulation is removed. Efficient prices are necessary to provide the appropriate signals for new investment and without full cost pass-through the viability of retailers and the entire supply industry is at risk.

esaa supports the development and implementation of a well designed ETS consistent with esaa's ETS design principles. However, esaa cannot support the CPRS unless these four issues are adequately addressed.

A measured transition to full auctioning

Rationale for initially providing administratively allocated permits to coal-fired generators

The environmental integrity of an ETS is not dependent on bankrupting generators. Australia's coal-fired generation assets have design lives which are measured in decades and were built at a time when there was no cost on greenhouse gas emissions and no clear prospect of when or how such a cost might be introduced. The clear beneficiaries of these investments were households, businesses and large industrial producers who paid considerably less for their energy use (second lowest in OECD countries) – the owners of the coal-fired assets have operated in a competitive market making only normal returns on their investment. Had there been a clear path for greenhouse policy, energy sector investors may have deferred or stopped investment in existing infrastructure and accelerated investment in different lower emission. Both would have increased the cost of electricity.

An ETS is simply a mechanism for trading the right to emit greenhouse gases up to a specified cap. The environmental integrity of the scheme comes from the choice of cap – not how the initial permits are allocated. However, the CPRS makes a set of choices designed to adversely impact existing coal-fired generators by requiring them to purchase almost all of their emissions from the scheme's commencement and using that revenue to 'compensate' households, businesses and large industrial producers who have historically benefited from the low electricity prices afforded by coal-fired generation.

Not all of the cost of the permits will be borne by electricity generators and some of it will be passed on to consumers. However, to the extent that cost pass-through is not possible and it results in the write-down of electricity generation assets, this should be recognised through the administrative allocation of permits. The administrative allocation of permits will not subsidise coal-fired generators and keep them in production any longer than necessary – once new, more competitive, lower emission technologies are constructed these coal-fired assets will begin to cease production. However, the administrative allocation of permits will help to ensure that these coal-fired generation assets remain in service until the transition to lower emission technologies can be made and allow new technology to develop. It will also give new investors in the energy supply sector the confidence that when the Government institutes major policy change, that has the potential to strand material long-life infrastructure assets, then the value of these assets will be recognised.

The administrative allocation of an insufficient number of permits to coal-fired generation assets in the transition to an ETS could have serious implications for the short-term viability of the electricity markets due to the financial distress of a significant number of generators. Impairing the balance sheets of coal-fired generation assets would also send a poor signal to future investors about the Government's willingness to make substantial policy change and strand electricity sector assets in the process.

The requirement to purchase 87% of the sector's current emissions from the first year of the Scheme is likely to result in an immediate reduction in generators' credit ratings and/or breaches of financial ratios (due to the immediate loss in asset value). At the very least, a number of generators would be unable to meet the prudential requirements of their Australian

Financial Services Licence and would be unable to trade, increasing the likelihood of electricity price volatility.

The current global financial crisis is also having a direct and immediate impact on the financial positions of a number of existing energy market participants and the Government's assumption that there will be a ready supply of potential investors and/or debt and credit providers to take over these distressed assets is heroic. Private-sector operators have reported difficulty in re-financing existing investments and obtaining finance for new projects. A number of participants are operating under financial arrangements that do not provide for a large shift in operating costs associated with purchasing permits and do not have access to sufficient credit lines (see Box 1).

Box 1: Impact of the global financial crisis

esaa recently surveyed its member companies to assess the impact of the global financial crisis on the energy supply industry. Key results from the survey show that:

- Australian energy businesses face a total refinancing obligation over the next five years of more than $50 billion (this represents more than one-third of the existing asset base).
- Generation businesses account for about $19 billion of total refinancing with some $8.5 billion due for renewal in 2011-12.
- Private sector participants account for about 78% of total generator refinancing.
- Approximately 45% of private participants reported a debt obligation to international banks.
- Capital expenditure in the generation sector over the next 5 years is estimated at between $17-19 billion.
- An addition $26 billion will be required over the next 5 years to purchase emission permits.

esaa members were also asked to comment on how the global financial crisis was impacting their business. Common concerns were:

- International banks have withdrawn from the Australian market or are reluctant to issue new debt. Energy companies are competing with other sectors of the economy for project funding.
- Risk margins and credit spreads have increased substantially – in the order of 200-350 basis points.
- Debt providers are reducing their exposure and requiring equity providers to take more risk at the same time that equity holders have incurred significant losses in asset value.
- Banks are placing more onerous covenants and restrictions on any refinancing.
- The tenor of debt renewals has shortened to 2 or 3 years.
- There is more due diligence on existing and new project financing resulting in delays in financing all transactions.
- The Government's decision to guarantee debt in the banking sector and that of state governments has constrained liquidity for sectors that do not benefit from the guarantee.

For many of those generators the introduction of the CPRS, compounded by the impact of the global financial crisis, could trigger a revision by financiers and/or result in the suspension of payment under hedge contracts as the generators would be unlikely to meet any requests for additional credit support (due to the large working capital impost of the CPRS). This may result in a series of financial defaults throughout the market. These events could significantly undermine investor confidence in energy markets and result in a reduced number of potential investors in the Australian energy sector for future developments, including low emission plants. Higher hurdle rates would apply to any new investments that did occur due to increased risk premiums. This would in turn increase retail energy prices.

Uncertainty has an important effect on investment decisions particularly when these decisions cannot be reversed, or only at great cost. In this context, it is useful to distinguish between uncertainty and risk. Risk can normally be managed through mitigation measures but uncertainty presents a more serious informational problem, because it implies that the distribution of fundamental parameters determining the value of an investment is largely unknown. In the presence of uncertainty, investors worry that their investment could be stranded and will tend to factor in the option of waiting for new information before making investment decisions. While uncertainty is a fact of life for investors, there are particular features of climate change policy that make investment uncertainty a significant problem of significant scale.

The scheme will fundamentally change the risk profile of electricity investments. The financial success of electricity investments will be highly dependent on the form and operation of rules and regulations of the scheme, which will be subject to change over time. In particular, there is likely to be significant and ongoing uncertainty over future targets and abatement pathways.

From an investment perspective, shifts in fundamental scheme parameters imply shifts in the price of carbon, and hence returns across various types of investments. Confidence in the likely direction of the regulatory arrangements is important for industries such as electricity where investment in assets is lumpy, and requires significant lead-time. This means even short periods of uncertainty can have significant effects on investment outcomes.

The provision of administratively allocated permits can mitigate these effects. It is a demonstration by the government that it recognises that policy changes can cause shocks to investors and is a commitment to minimising the detrimental effects of uncertainty resulting from policy changes that are outside the control of investors. In providing administratively allocated permits, the Government effectively imposes an opportunity cost on itself when it comes to making significant changes to scheme parameters. This in turn can encourage the Government to make any changes in an orderly way and with sufficient advance notice.

In addition, unless it is assumed that there is a substantial pipeline of new producers and projects that will come on line relatively quickly, the delivery of the abatement objective is in part contingent on the decisions made by current asset holders. If these asset holders suffer substantial asset stranding, their investment decisions will be affected. The provision of administratively allocated permits will help to give existing asset holders confidence that their new investments are not likely to be subject to stranding risk. Finally, if existing asset holders are financially distressed, the provision of administratively allocated permits can help to minimise the impact such distress has on future investment decisions. Investors are concerned that if the Government can make a radical regulatory change once, it may do it again in say 10-15 years time, when even new-build assets may have only operated for one third of their design life.

The CPRS White Paper makes reference to the notion of foreseeable regulatory change and the view that investors should have taken account of carbon price risk in the discount rate applied to new investments.

Many of the existing coal-fired generators currently supplying the bulk of electricity in Australia were built and commissioned more than two decades ago. For more recent investments and acquisitions, investors have had no empirical basis to make an assessment of carbon price risk as there has been no detail or information on the timing, form or level of a carbon impost. It is only in the last two or three years that the industry has seen actual detail on a possible national approach to emissions trading. As the Green Paper recognises, it was not until June 2007 that there was bipartisan support at the national level for a broad-based ETS. Importantly, all of the national schemes that have been canvassed in recent years by state and federal governments have accepted the need for offsetting asset value losses through administratively allocated permits to high emission plant adversely impacted by the introduction of a price on emissions.

Insufficient administratively allocated permits to coal-fired generators

In the first ten years of the scheme, electricity generators will be required to surrender around 2 billion emission permits at a cost of $55 billion (real). The White Paper proposes to administratively allocate only 130.7 million permits to coal-fired generators with the remaining almost 1.9 billion to be purchased. This translates to only 13% of the sector's emissions in comparison to the 100% allocation of permits in the early years of the European scheme. However, esaa has never argued for a 100% administrative allocation of permits to coal-fired generators.

The administrative allocation should reflect any loss of asset value, over and above the average loss in asset value experienced by the rest of the economy, from the introduction of an ETS. The proposed administrative allocation of 130.7 million permits is insufficient and considerably lower than the consensus of modelling results (including two sets of Government modelling results) which suggest at least 400 million permits (or 40% of the sector's emissions) should be administratively allocated over the first ten years of the scheme to prevent the impairment of the generation sector's balance sheets. It should also be noted that for many coal-fired generators, the loss in asset value extends well beyond the first 10 years of the CPRS.

To inform the decision on the required number of administratively allocated permits, the Government commissioned three separate models to assess the likely impacts on asset value that the CPRS may have on the sector. Over the first decade of the CPRS, MMA concluded that the asset value loss for coal-fired electricity generators was $2.3 billion, while ROAM Consulting and ACIL Tasman reported losses of $9.4 billion and $10.5 billion respectively.

The latter two estimates of asset value loss are broadly consistent with the ACIL Tasman study for esaa and with the first 10 years of losses under a CRA International study undertaken for the National Generators' Forum. Interestingly, MMA's previous modelling for the National Emissions Trading Taskforce had asset value losses much higher than $10 billion and considerably higher than its $2.3 billion estimate for the CPRS.

It is therefore surprising that, in the face of multiple, broadly consistent pieces of quantitative analysis, the Government determined that $3.5 billion worth of administratively allocated permits would be sufficient assistance to coal-fired generators to mitigate the negative impacts of financially distressed generators and to secure investor confidence in the energy market. A key factor in the Government's decision to only allocate $3.5 billion worth of permits seems to have been "competing Budget priorities" but ultimately it will be the market that will determine whether this is sufficient and, if it proves to be insufficient, the impact on the energy sector and the broader economy could be extremely costly. The limited assistance provided may not be sufficient to mitigate the risks identified.

Tenure and timing of announcement of Scheme caps and gateways

With a measured transition to full auctioning that provides a sufficient administrative allocation of permits to coal-fired generators, an ETS is the best mechanism for pricing greenhouse gas emissions and ensuring investor confidence in the energy sector. However, investor confidence in the energy sector is dependent on the ability to confidently determine a clear view of future greenhouse gas emission prices. To date, this has not been possible, but the introduction of the CPRS was intended to rectify this.

However, the Government's decision to only commit to five years of firm scheme caps is disappointing. esaa recognises that the setting of scheme caps and gateways requires a balance between the criteria of economic efficiency and policy flexibility to allow the Government to respond to changes in scientific knowledge and international commitments.

However, the proposed timeframes for the scheme caps and gateways do not appropriately balance certainty and flexibility.

The Government proposes to provide a 15-year window of scheme caps and gateways, declining to 10 before being extended to 15 once again. This is an inadequate timeframe for planning long-lived, capital intensive investments. esaa considers that at a minimum, annual scheme caps should be set for a 10-year period that is extended by one year, each year. The proposition of a 10-year gateway is supported as it then makes for an effective 20-year view of scheme caps and gateways. However, rather than allowing the gateway to contract to five years before the next gateway announcement, the gateways should also be extended by one year, each year.

The Government is the only entity that can commit Australia in international negotiations and, therefore, the Government should bear the risk of future scheme caps and/or gateways being inappropriate. If the Government enters an international agreement that requires it to reduce emissions below the scheme caps or gateways, it should purchase the required abatement on the international market.

To enable generators to write future hedge/bilateral contracts, the joint industry response to the Green Paper argued that the scheme caps and gateway need to be announced as soon as possible and permits made available. Currently, there are very few hedge contracts being offered beyond June 2010 because the cap on greenhouse gas emissions in the CPRS is largely unknown. This uncertainty is also inhibiting the formation of bilateral contracts in the SWIS.

Permit auction design

esaa is supportive of moving towards 100 per cent auctioning of permits after a sufficient administrative allocation of permits has been made. As the largest liable sector, an auction design that is efficient in price discovery; manages the significant working capital requirements of liable entities; and assists parties to meet their obligation at least-cost is of considerable importance.

Full auctioning will require generators to purchase and surrender approximately 200 million permits annually. In addition, generators will also need to purchase ahead to support forward contracts. With an indicative national emissions target range of between 5 and 15% below 2000 level emissions at 2020, generators will need to hold permits well in excess of $10 billion – more than $4 billion worth of permits to comply with the CPRS and more than $6 billion worth of permits to support forward electricity contracting. This will significantly increase working capital requirements and exacerbate costs to meet prudential requirements.

The joint industry submission to the CPRS Green Paper argued that to manage this, auctions should be held regularly and for a stream of future years. The Government has recognised this issue and the White Paper commits to monthly auctions compared to the quarterly auctions proposed in the Green Paper.

In addition, the joint industry submission argued that flexible settlement terms should be available to enable better management of reduced cash flows and to reduce the need for additional credit support. The Government has also recognised this concern in the White Paper and has committed to considering deferred settlement arrangements in consultation with industry. esaa considers that a payment deferral facility for both current and future vintages is critical and should be a permanent feature of the scheme to manage working capital requirements and assist forward contracting in the electricity market.

Currently there is a considerable lack of forward contracts being written in the electricity wholesale markets, owing to both the uncertainty over scheme caps and the lack of availability of permits.

Prior to the EU ETS commencing, forward contracts in the electricity wholesale markets were continuing to be written for periods after the Scheme commenced. Market participants could continue to confidently take positions in the market because the vast majority of their permits were administratively allocated. In fact, in the EU only 3-7% of permits will have been sold until 2012 with the rest administratively allocated.

While in a number of EU countries with a heavy reliance on coal-fired generation, administratively allocated permits will remain until 2020. In contrast, the Australian market does not have such assurances and the White Paper's commitment to auction the first permits in early 2010 does little to address the current problem. At this stage, it would appear that both the working capital requirements and limited availability of permits will not support the level of forward contracting that has been the practice in the NEM over the last 10 years. This will create increased risks – particularly for retailers and their customers.

Cost transparency

esaa has long supported the removal of retail price regulation where competition is demonstrably effective. A study undertaken for esaa by CRA International into the effect of retail price regulation found that price regulation in contestable retail energy markets is likely to confer little or no public benefit but impose considerable direct and indirect costs, thus reducing overall welfare[1].

For the CPRS to operate efficiently and provide least-cost emission reductions, consumers should be exposed to the cost implications of greenhouse gas emissions. The retention of regulated price caps creates the real risk that retailers may be prevented from passing on higher wholesale energy and network related costs and increased prudential costs associated with the CPRS in a timely manner. This could force retailers to experience significant losses and be unable to contract forward with generators. Systemic failure or financial distress among major retailers would increase volatility and risks in the energy market, reduce competition and potentially undermine system reliability and security of supply.

The Federal Government has acknowledged in the CPRS White Paper that ideally there should be no regulatory impediments to the timely pass-through of reasonable costs, to ensure the objectives of the CPRS are not undermined. The White Paper goes on to recognise that competition and consumer choice are the best ways to achieve cost-effective demand-side participation in energy markets. However, it concludes that the best way to progress cost pass-through is to support the work of the Ministerial Council on Energy (MCE). The MCE agreed at its meeting on 12 December 2008 to propose to the Council of Australian Governments that the Australian Energy Market Agreement (AEMA) be amended to specify that, where retail prices are regulated, energy cost increases associated with the CPRS shall be passed through to end-use customers.

esaa has concerns as to the effectiveness of the proposed approach to facilitating appropriate and timely cost pass-through for retailers. esaa considers that the introduction of the CPRS and the imposition of other climate change measures will make the already difficult task of setting cost-reflective retail prices for those customers eligible for 'standard' or 'default' tariff offers substantially more complex. The AEMC concluded in its Interim Report for the Review

[1] esaa (January 2007) The effects of retail price regulation in Australian energy markets, CRA International. Available from http://www.esaa.com.au/reports__studies.html

of Energy Market Frameworks in light of Climate Change Policy that “we do not consider that the current retail price regulation arrangements are sufficiently flexible to be able to cope with the potentially large and rapid changes in retailer costs”.

Designing a regulatory regime that can set retail prices in advance based on forecasts of likely forward wholesale prices, network charges and retail costs and margins is an inherently difficult task. esaa considers that retail prices set by open and competitive retail markets provides retailers with the greatest flexibility to pass-through such costs and provide end use customers with appropriate signals to engage in cost effective energy efficiency and demand-side management activity.

Where governments are unwilling to commit to reform, there should be a consistent, national framework for the regulation of both electricity and gas retail prices that enables cost-reflective pricing and the full pass-through of emissions related costs to consumers.

Complementary measures

esaa supports the development of a reliable and sustainable energy supply system, where greenhouse gas emissions reductions are achieved at least-cost through rational policy settings and measures that are national, long term and complementary to competitive market arrangements. This objective is most effectively achieved by implementing an efficient economy-wide national ETS as the primary emissions reduction policy. Climate change measures beyond an ETS must be demonstrably complementary and result in cost beneficial outcomes.

An increasing number of overlapping energy efficiency and greenhouse focused regulatory and market-based schemes are being developed and implemented at Commonwealth, State and Territory, and local government levels. Initially, the energy sector understood these schemes were largely adopted with the objective of fostering momentum towards a national suite of emissions reduction and energy efficiency programs. Examples of such programs in operation or in their implementation phases include:

- Victorian Renewable Energy Target;
- Victorian Energy Efficiency Target;
- New South Wales Greenhouse Gas Abatement Scheme;
- New South Wales Energy Savings Scheme;
- South Australian Residential Energy Efficiency Scheme;
- Expanded Federal Renewable Energy Target;
- Queensland Gas Electricity Scheme;
- Queensland 10% Renewable and Low Emissions Target;
- Solar feed-in tariff schemes (multiple jurisdictions); and
- Commonwealth Greenhouse Friendly product and service labelling program.

Each of these programs and schemes has closely aligned objectives of promoting emissions reductions directly or by supporting investment in low-emissions technologies.

In February 2008, the Commonwealth announced a strategic review of climate change policies aimed at establishing which existing measures were effective complements to an emissions trading scheme. To date, the report and outcomes of the strategic review, headed by Mr Roger Wilkins and based in the Department of Finance and Deregulation, have not been released.

The Commonwealth and State and Territory Governments are cooperating in the design of nationally consistent measures to complement an emissions trading scheme, through the Council of Australian Governments (COAG) Working Group on Climate Change and Water. In November 2008, COAG[2] announced the following principles for assessing the suitability of complementary measures:

1. The measures are targeted at a market failure that is not expected to be adequately addressed by the Carbon Pollution Reduction Scheme or that impinges on its effectiveness in driving emissions reductions.

2. Complementary measures should be tightly targeted to the market failure and be amenable to government intervention. Where the measures are regulatory they should meet best-practice regulatory principles, including that the benefits of any government intervention should outweigh the costs.

3. Complementary measures may also be targeted to manage the impacts of the Carbon Pollution Reduction Scheme on particular sectors of the economy (for example to address equity or regional development concerns). Where this is the case, in line with regulatory best-practice, the non-abatement objective should be clearly identified and it should be established that the measure is the best method of attaining the objective.

4. Where measures meet the above criteria, they should generally be implemented by the level of government that is best able to deliver the measure.

COAG has indicated that it is aiming to achieve "a coherent and streamlined set of climate change measures in 2009". To date, it appears only NSW and Victoria have initiated a review of existing jurisdictional measures to assess which policies are complementary to a national ETS.

Research, development and deployment

The move to a lower emission economy requires the ongoing development of technologies, products and processes to reduce the emissions from energy to enable Australia to achieve significant abatement objectives in the medium and longer terms.

Although an ETS will provide an emissions price signal, this price may not attract sufficient investment into research, development and deployment projects. On its own, the private sector may not always invest adequately because individual companies cannot always capture sufficient returns relative to the costs and risks involved. The Government's role is to address this market failure and facilitate a level of spending that reflects the wider economic benefits.

The Garnaut Review considered the role of innovation as a complementary policy to an ETS[3]. The Review concluded that research and development of low-emissions technologies is an international public good, requiring high levels of expenditure by developed countries. The Review recommended that:

[2] http://www.coag.gov.au/coag_meeting_outcomes/2008-11-29/#tabs
[3] Garnaut Climate Change Review, 2008, p.424.

- Australia should make a proportionate contribution alongside other developed countries in its areas of national interest and comparative research advantage. This would require a large increase in Australian commitments to research, development and deployment of low-emissions technologies to more than $3 billion per annum by 2013.

- To achieve an effective commercialisation effort on a sufficiently early time scale, an Australian system of matching funding should be available automatically where there are externalities associated with private enterprise investment in low-emissions innovation.

esaa agrees that more effort and funding will be needed through time to develop new low emission technologies (both generation and demand side management).

The decision to allocate funds to particular research projects will inevitably involve trade-offs between providing technology-neutral and technology-specific support. esaa considers that additional funding should be allocated to support the deployment and commercialisation of new technologies and processes that build on Australia's comparative advantages and involve the adaption of new or international technologies to domestic conditions.

Energy efficiency measures

esaa considers that there are five barriers to the optimal uptake of energy efficiency that will not be resolved solely by the introduction of the CPRS:

1. The absence of dynamic, cost reflective pricing of energy that encourages consumers to make stronger, more energy efficient choices;

2. A lack of information and education on product energy ratings and energy saving practices;

3. Capital constraints faced by financially vulnerable customers that restricts their ability to invest in energy saving infrastructure that has longer pay-back periods;

4. Split incentives between the occupant of a premises and the owner of the premises to install energy efficient products – the landlord may pay for a more energy efficient building but the tenant benefits from lower energy costs; and

5. Limited interest in understanding the potential benefits of more energy efficient products.

The persistence of such barriers subsequent to the internalisation of greenhouse gas emissions costs under the CPRS may warrant the need for complementary policies. However, the Association does not support energy efficiency trading schemes such as the NEET Scheme. esaa considers they do not cost effectively address the barriers to energy efficiency and opposes their introduction at a state or national level. Instructively, the Productivity Commission concluded the case for energy efficiency targets, including tradeable energy efficiency certificates, is weak on the basis of administrative burden, exposure to gaming, difficulty in verifying reductions and low effectiveness.

To achieve the most efficient, national response to the challenge of improving energy efficiency, esaa considers that Australia should establish a single, national organisation – *Energy Efficiency Australia (EEA)* – to be solely responsible for developing policy advice to all Governments and administering national energy efficiency measures that complement the CPRS. Individual governments would still be the final arbiters on energy efficiency policy measures and continue to legislate for their application, based on national approaches with policy development and implementation support from *EEA*.

Demand side management

esaa considers that demand side management (DSM) is also an important complementary measure to an ETS. Proactive DSM will allow for more efficient load management, through changes in time of use and increased adoption of energy efficiency.

Network business can play a key role in implementing DSM, provided that economic regulation allows for such developments. Presently, the most significant barrier to DSM is the difficulty in regulatory frameworks adequately recognising expenditure on DSM initiatives. Appropriate incentives should be developed to allow network service providers to actively indentify and develop DSM measures and markets. Appropriate incentives are required to facilitate research and development and to enable network service providers to better understand any potential service and reliability risks associated with DSM options.

Finally, esaa considers that network pricing should be fully reflective of the impact of demand on network capacity in order to provide appropriate signals for end use behavioural change.

Feed-in tariffs

Feed-in tariffs (FiTs) are an inefficient mechanism for reducing greenhouse gas emissions involving a regressive cross-subsidy that can further promulgate the disparity of state-based schemes and distort the National Electricity Market (NEM).

In discussion papers from those jurisdictions contemplating a FiT, the cost per tonne of CO2e abated has varied considerably. Acknowledging that the actual structure and rate of the FiT will affect the cost of greenhouse gas emissions reductions considerably, estimates have ranged from $200 through to $1,500 per tonne of CO2e. Such costs compare unfavourably against any measure of cost-effective emissions reductions. Certified Emission Reductions under the Kyoto Protocol's Clean Development Mechanism trade at around $20 per tonne of CO2e, and offset credits under Australian programs including the NSW Greenhouse Gas Reduction Scheme have typically ranged between $3 and $15 per tonne of CO2e.

Additionally, recent modelling by the Federal Treasury indicates that carbon prices of $35 to $50 per tonne of CO2e could achieve abatement of between 5 and 15 per cent below 2000 levels at 2020.

Typically a FiT will increase average energy costs to all energy users, however this will impact lower income groups more significantly due to the greater proportion of income they spend on energy. For example, a recent study performed by CSIRO Sustainable Ecosystems[4] found that high-income households spend just 5 per cent of their income on energy, compared to 15 per cent for low-income households. In contrast to the costs, the benefits of FiT payments will regressively accrue to higher income groups who have the means to take advantage of the subsidy.

A feed-in tariff could only be considered complementary to an ETS if the tariff was actually calculated on an efficient basis and reflected the value of the energy produced plus the avoided costs of network augmentation discounted by the cost imposed on the network from accommodating the two-way flow of electricity. A tariff calculated in this way would be much lower than any feed-in tariff currently proposed in Australia.

[4] Hatfield-Dodds, S. and Denniss, R. 2008, *Energy Affordability, Living Standards and Emissions Trading: Assessing the social impacts of achieving deep cuts in Australian greenhouse emissions*. Report to the Climate Institute, June 2008. CSIRO Sustainable Ecosystems, Canberra.

Technology specific targets

Technology specific targets, such as the national Renewable Energy Target, are a combination of a command and control measure (setting the quantity of renewable energy to be supplied to the market) and a market-based measure (a trading mechanism is in place to deliver the measure).

A broad market-based measure, such as an ETS, would ensure that those technologies that can achieve greenhouse gas abatement at least-cost are facilitated. Targeting specific technologies requires a policy justification that is beyond greenhouse gas abatement. Currently the mandated generation of renewable energy into the electricity market comes at an additional cost to consumers and is likely do so for some time. A study by ACIL Tasman, commissioned by esaa, found that at 2020 an emission permit price of $55/tCO2e did not negate the need for a separate price incentive for renewable energy generation such as Renewable Energy Certificates (RECs).

esaa considers that any measures additional to an ETS should only be deployed where it can be demonstrated that they are likely to reduce the overall cost to the economy by overcoming a demonstrable market failure. However, where they exist, they should be delivered nationally and esaa is pleased with the commitment by COAG to bring together the existing and planned State and Commonwealth renewable energy targets into a single national target, to be phased out between 2020 and 2030 as the ETS matures.

Conclusion

esaa supports the implementation of a well designed national ETS as a critical measure for reducing greenhouse gas emissions and ensuring investor confidence in the energy sector. A well designed ETS must be efficient, effective and equitable in the long-term and, importantly, must ensure a smooth and orderly economic transition in the short-medium term. For the ETS to operate most effectively, the costs of greenhouse gas emissions must be passed on to consumers in a timely manner.

esaa considers the COAG framework for complementary measures to an ETS is a positive development. However, the Association is alarmed by the continuing promulgation of non-complementary, jurisdictional-specific measures that are ineffective and are resulting in additional compliance costs in the energy supply sector. Finally, it is considered that more effort and funding will be needed through time to develop new low emission technologies (both generation and demand side management).

Yours sincerely

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