14 September 2012

Mr B W Fraser
Chairman, Climate Change Authority
GPO Box 1944
Melbourne VIC 3001
By email: submissions@climatechangeauthority.gov.au

Dear Mr Fraser

Submission to the review of the Renewable Energy Target (RET) Scheme

Please find attached the Australian Coal Association's (ACA's) submission to the Authority's review of the Renewable Energy Target (RET). We consider the RET is fundamentally bad policy and should be abolished. Existing property rights (including for waste coal mine gas used in electricity generation) should be grandfathered or compensated.

Our submission argues that:

- Mandating fuel sources or technologies reduces choice, distorts markets and increases costs
- The past twenty years of economic reform of the Australian economy confirms that open market approaches yield enduring value to all Australians
- Complementary measures, such as the RET, can only be justified if they address a demonstrable market failure that is not already ameliorated by the carbon price or other initiatives
- Sensible climate change and energy policies must encourage the development of all low emissions technologies, guard against ad hoc interventions by government in the energy market and avoid the trap of picking winners
- The RET effectively picks winners in the form of mature and expensive renewable technologies, instead of supporting R&D and motivating market players to commercialise the most efficient low emissions technologies
- Such an approach is at the expense of households and businesses, as the RET contributes to unnecessarily high electricity costs. It also acts as a tax on a fundamental business input
- The environmental rationale of the RET – to reduce Australia's CO_2 emissions – has been made redundant by the introduction of the Federal Government's carbon tax
- International experience shows that raising a nation's share of renewables through regulation imposes additional hidden costs on an economy
- Carbon capture and storage is essential to reducing emissions from the use of fossil fuels – including both coal and gas – yet it is discriminated against by the RET and other complementary measures such as the Clean Energy Finance Corporation.

The ACA would be pleased to provide further information to the review and participate in its planned consultations. The contact in the ACA's secretariat for this submission is Peter Morris, email address: peter.morris@australiancoal.com.au and phone contact (02) 6120 0205.

Yours sincerely

Jai McDermott
A/g DEPUTY CHIEF EXECUTIVE OFFICER

AUSTRALIAN COAL ASSOCIATION

SUBMISSION TO THE RENEWABLE ENERGY TARGET REVIEW

14 SEPTEMBER 2012

About the Australian Coal Association

The Australian Coal Association (ACA) represents Australia's black coal industry. Its members account for over 95 per cent of Australia's coal exports, which are expected to add $48 billion to national income in 2011-12. Black coal is the most important export earner for NSW and Queensland, and Australia's second largest export industry.

The ACA's members also supply coal for domestic power generation and for the manufacture of iron, steel, alumina, manganese, mineral sands and cement. Currently, black coal fuels 51 per cent of electricity produced in Australia for public consumption, including 90 per cent of electricity in NSW and 77 per cent in Queensland.

EXECUTIVE SUMMARY AND RECOMMENDATIONS

The Australian Coal Association (ACA) represents Australia's black coal producers, with members responsible for more than 95% of coal exports.

The Renewable Energy Target (RET) is fundamentally bad policy and should be abolished. Existing property rights (including for waste coal mine gas used in electricity generation) should be grandfathered or compensated.

Mandating fuel sources or technologies reduces choice, distorts markets and increases costs. The RET effectively picks winners in the form of mature and expensive renewable technologies, instead of supporting R&D and motivating market players to commercialise the most efficient low emissions technologies.

This approach is at the expense of households and businesses, as the RET contributes to unnecessarily high electricity costs. It also acts as a tax on a fundamental business input.

The environmental rationale of the RET – to reduce Australia's CO_2 emissions – has been made redundant by the introduction of the federal government's carbon tax. Now that Australia has a price on carbon, the RET is simply adding to the cost of abatement that would be happening anyway, rather than adding to the abatement outcome. Economists agree that this additional cost is far higher than the starting fixed carbon price of $23/tonne. This offends against the principle of pursuing abatement at the least cost available.

International experience shows that raising a nation's share of renewables through regulation imposes additional hidden costs. Since renewable fuel sources are generally intermittent and electricity cannot be stored in significant amounts, renewables must be backed up by conventional fuel sources – whether coal, gas, hydro or nuclear.

As a country's share of renewables increases, additional investment in baseload power sources is needed to enable them to ramp up and down quickly to support rapid and unpredictable fluctuations in renewable output. Germany provides a recent example, having opened the world's largest brown coal power station in August 2012, a plant specifically designed to support renewables in the grid.

Germany also provides an important point of comparison with Australia, possessing a geographically dense electricity grid with the added flexibility to import nuclear power principally from France if additional baseload generation is required. In contrast, Australia has a highly dispersed grid and no access to external additional baseload power sources. And while Australia relies on coal for 75 per cent of electricity generation, there are no plans in Australia at the present time to commission new coal- or gas-fired power stations, either to replenish our ageing fleet or to supplement renewables.

Australia needs a rational approach to climate change and energy policy, which encourages least cost abatement and does not needlessly compromise our standard of living or our international competitiveness.

Over the past twenty years, economic reform of the economy has confirmed the enduring value of open market approaches. Under such an approach, so-called complementary measures can only be justified if they address a demonstrable market failure that is not already ameliorated by the carbon price. Australia is extremely fortunate to have a comparative advantage in coal, which will continue to form the backbone of world and Australian electricity generation for decades to come. Sensible climate change and energy policies must encourage the development of all low emissions technologies, guard against ad hoc interventions by government in the energy market and avoid the trap of picking winners.

Carbon capture and storage is essential to reducing emissions from the use of fossil fuels – including both coal and gas – yet it is discriminated against by the RET and other complementary measures such as the Clean Energy Finance Corporation.

Recommendations

The Australian Coal Association recommends that the Federal Government:

(1) Acknowledge that:

   (a) The Renewable Energy Target (RET) is fundamentally bad policy because it mandates deployment of costly, mature technologies rather than supporting R&D and leaving the market to drive deployment

   (b) The introduction of the carbon tax means that the RET is now simply adding to the cost of achieving Australia's abatement targets, rather than encouraging additional abatement

   (c) The RET should be abolished and existing property rights (including for waste coal mine gas used in electricity generation) should be grandfathered or otherwise compensated

(2) Rectify the significant flaws of the current carbon tax package by:

   (a) Aligning Australia's climate change policy approach with international action and allowing unrestricted access to international permits

   (b) Adopting a phased approach to the auctioning of emissions permits for trade-exposed industries

   (c) Phasing in the inclusion of coal mine fugitive emissions in step with Australia's coal export competitors and over a time frame consistent with the development of fugitive abatement technologies from their current experimental stages to safe, reliable, deployable equipment and processes at commercial scale

   (d) Removing inefficient programs that are no longer required in light of the introduction of the carbon price. Should the Clean Energy Finance Corporation be objectively assessed as efficiently addressing clearly established market failures, it should be expanded to include all low emissions technologies, including carbon capture and storage projects. The Energy Efficiency Opportunities scheme should be refocused to address only demonstrable barriers to the uptake of energy efficiency opportunities

   (e) Ensuring any measures do not adversely impact the international competitiveness of Australian industry and provide necessary transitional assistance to coal and all other export and import competing industries

(3) Establish an efficient, long-term carbon pricing mechanism as part of an international agreement that includes all the world's major greenhouse gas emitters. This long-term price should be complemented by measures to support substantial private investment in a broad range of low emissions technologies, including those applicable to fossil fuels.

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1 ASSESSING THE EFFICIENCY AND EFFECTIVENESS OF THE RENEWABLE ENERGY TARGET SCHEME

The *Climate Change Authority Act 2011* states that:

> *'In performing its functions, the Authority must have regard to the following principles:*
> *(a) the principle that any measures to respond to climate change should:*
> *(i) be economically efficient; and*
> *(ii) be environmentally effective; and*
> *(iii) be equitable; and*
> *(iv) be in the public interest; and*
> *(v) take account of the impact on households, business, workers and communities; and*
> *(vi) support the development of an effective global response to climate change; and*
> *(vii) be consistent with Australia's foreign policy and trade objectives;*
> *(b) such other principles (if any) as the Authority considers relevant.'*

The Australian Coal Association (ACA) welcomes such a principled approach to conducting the Authority's review of the Renewable Energy Target (RET). The ACA also assesses climate change policy options and proposals against similar, high-level principles, as set out in the Minerals Sector Statement of Principles on Climate Change Policy (reproduced in Attachment A**)**.

Such an approach will ensure Australians are fully informed about the cost and complexity of transitioning to a low emissions economy as well as the efficiency of Government policy approaches and individual programs. In particular, the current review of the RET should seriously scrutinise the impact of the scheme on electricity prices and, over the longer term, its impact on Australia's energy supply. In doing that it should have regard to the fact that Australia overwhelmingly relies on fossil fuels including coal for secure, affordable, safe and reliable electricity. This underpins both household standards of living and the competitiveness of Australian business.

Indeed, it is little appreciated that the economic significance of the coal industry to Australia goes well beyond its position as the nation's second largest export earner. Coal is Australia's principal source of relatively cheap and reliable base load power, which underpins both our domestic energy security and our international competitiveness. There is no other fuel – fossil or renewable – that can perform this vital competitive role in the power generation mix. Thus coal gives Australia a comparative advantage that is embedded in the economy.

Competitively priced coal has long supported Australia's energy intensive sector, defined as businesses where electricity is the largest component of operating costs. It is estimated that this sector employs approximately one million Australians. Moving to a much higher cost energy supply will put tremendous additional pressure on these industries and, by extension, the people they employ. While federal government modelling points to a decline in the share of coal in the mix, it will still be the largest single source of Australia's power in 2034-35.

1.1 The Stated Objectives for the Renewable Energy Target

The objects of the RET Scheme are set out in section 3 of the *Renewable Energy (Electricity) Act 2000* (as amended) as follows:

> *(a) to encourage the additional generation of electricity from renewable sources; and*
>
> *(b) to reduce emissions of greenhouse gases in the electricity sector; and*

(c) to ensure that renewable energy sources are ecologically sustainable.

The Act gives effect to the Australian Government's 2008 election commitment to require 20 per cent of Australia's electricity generation to come from renewable energy sources by 2020. It effectively absorbed existing and proposed state and territory renewable energy schemes.

The Australian Government argues that:

> *'The Renewable Energy Target complements the carbon price by driving additional large and small-scale renewable energy deployment …'*

and that:

> *'the carbon price and enhanced Renewable Energy Target were always intended to work together to drive clean energy, particularly in energy infrastructure that will be built in the next few years and still be with us in 2050.'* [1]

According to the (Wilkins) *Strategic Review of Australian Government Climate Change Programs*,[2] the main arguments given in support of the RET continuing, in addition to a market based carbon price, are that it:

- Enhances renewable industry development
- Complements the carbon price to achieve abatement that would not occur otherwise
- Improves energy security by bringing on stream a greater quantity of renewable energy and helping to smooth domestic consumption of gas reserves.

As will be explained in this submission, these arguments are misguided. In fact the RET imposes a high cost on society which is non-transparent and increases the cost of electricity market investment. Furthermore, it does not contribute to higher emissions reductions under the cap imposed by the Australian Government's carbon pricing mechanism.

1.2 Mandating particular fuel sources reduces choice and increases costs

The RET supports the development of Australia's renewable energy industry by enabling a higher price for electricity generated from renewable energy sources than electricity generated from fossil fuels.

By its nature, such mandated targets are distorting. For example, the RET discourages base load and more economical peaking power investment options and dictates how part of the national abatement task will be met – displacing far lower cost abatement opportunities.

It might be argued that in its favour the RET does not specify any particular renewable energy technology or renewable energy source. So in theory, at least, it allows all renewable energy technologies to compete for the market established by the scheme. In practice however, it mandates the deployment of costly, mature technologies, notably wind, rather than supporting R&D for all low emissions technologies and leaving the market to deploy the most efficient options. So in effect the scheme acts as an industry subsidy rather than encouraging the most efficient way of deploying technologies. The policy efficient goal should be to promote all low emissions technologies and least cost energy sources based on Australia's comparative advantages.

In the Second Reading Speech for the RET legislative amendments in June 2009, the Minister for Climate Change said:

> *'The Renewable Energy Target Scheme will accelerate deployment of a range of renewable energy technologies like wind power, solar, biomass and geothermal power over the next two decades.'* [3]

[1] The Hon Greg Combet, 2012, "Renewable energy in Australia's clean energy future", Clean Energy Council Clean Energy Week Sydney Convention and Exhibition Centre 25 July.

[2] Roger Wilkins (2008), Strategic Review of Australian Government climate change programs, 31 July, p 52.

[3] The Hon Greg Combet, Hansard, 17 June 2009, p 6251.

However, as predicted in 2008 by the Australian Electricity Market Operator (AEMO), the expanded RET has had the effect of bringing forward investment dominated by wind due to its cost advantage relative to other available renewable technologies.[4] This renewable plant creates challenges for system operation, as wind has rapid and unpredictable variations in output and the technical features of wind-powered generation differ compared to thermal generation.

This increase in intermittent generation has, in turn, necessitated investment in new, flexible, 'peaking' gas-fired generation to complement the intermittent nature of windfarm output (ie, it has been necessary to provide capacity to back up the wind-powered generation at times when it is not running).

Similarly, economies with a high share of renewables, such as Germany and Sweden, have to maintain a large, reliable back-up supply of energy, from sources such as nuclear, coal or even hydro where possible. Germany is now replacing its nuclear capacity with coal and constructing eleven new coal-fired power stations. As recently as August 2012, Germany opened a new brown coal plant at Neurath.

Mandating fuel sources distorts the electricity market as it impacts choice about the mix of fuel types available to deliver electricity thus increasing costs and impacting on the relative attractiveness of Australia as an investment destination, especially for energy intensive industries. In addition, requiring additional investment to address intermittency risk adds further costs to the economy. Electricity customers pay more for their power and Australia's energy intensive and trade exposed industries are particularly impacted as they are unable to pass on any cost impost to their customers overseas.

The ACA considers that Australian households, business, workers and communities would be far better served by a policy approach that focuses on open markets and recognises the abatement challenge is closely related to the availability of step-change, low emissions technology solutions.

1.3 The RET is an extremely costly way to reduce CO_2 emissions

A key justification for the RET is that it is an efficient abatement mechanism.

Essentially, the cost of abatement under the RET is equal to the resource cost of producing renewable generation capacity per unit of abatement induced by the scheme. However, both of these elements are uncertain.

Firstly, the resource cost of producing renewable generation will be related to the RET certificate price, but will not necessarily be precisely reflected in that price. Other factors (including direct subsidies to some renewable production, including feed-in tariffs, and taxation implications[5]) mean that the resource cost may be significantly higher than the certificate price.

Secondly, the abatement induced by the scheme can be measured as the emissions avoided from the alternative generation that is displaced by the new renewable generation. The avoided emissions clearly depend on what form of generation is replaced by the renewables. It is not necessarily the case that the most emissions intensive generation is replaced.

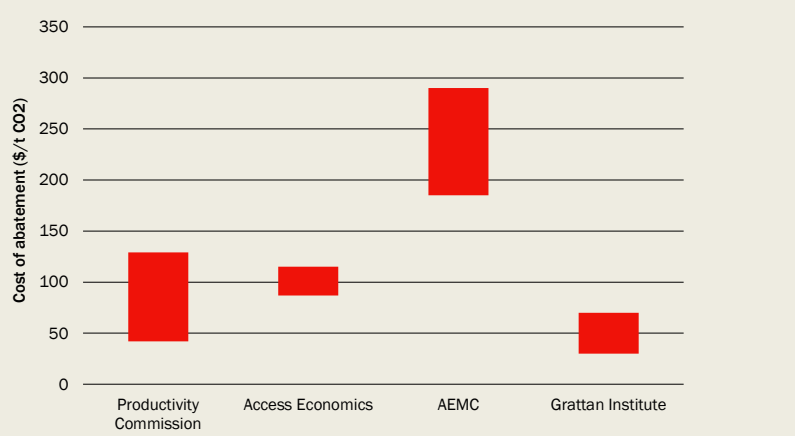
Several recent reports have estimated the costs of abatement under the RET scheme. Chart 1.1 summarises the overall range for the total RET scheme while Table 1.1 provides more details of each of the calculations. While the methodologies used across the estimates vary slightly, they all indicate a relatively high cost of abatement under the overall RET scheme,

[4] Australian Energy Market Commission (AEMC) 2008, Survey of Evidence on the Implications of Climate Change Policies for Energy Markets, p 33.

[5] Since the purchase of Large-scale Generation Certificate is tax deductible but the shortfall charge is not, the statutory penalty price of $65 per certificate equates to around $93/MWh after tax. AEMC 2011, Impact of the enhanced Renewable Energy Target on energy markets, 25 November, p i.

the large scale Renewable Energy Target (LRET) and particularly the small scale Renewable Energy Scheme (SRES).

Chart 1.1 Ranges for the cost of abatement under the overall RET scheme



Data sources: See table 2.3.

Table 1.1 Comparison of the cost of abatement under the RET

	Productivity Commission (2011)	**Deloitte Access Economics (2011)**	**AEMC (2011)**	**Grattan Institute (2011)**
Measure of cost of abatement	Implicit abatement subsidy[6]	Cost of purchasing Renewable Energy Certificates divided by total emissions abatement achieved	Cost relative to change in emissions[7]	Cost of complying with scheme relative to abatement achieved
Relevant year(s)	2009-10	2020	2011-2020[8]	2010
Cost/subsidy equivalent under LRET scheme (A$m)	283-459	n/a	320-495	
Abatement under LRET	4.1-7.6 Mt CO_2	n/a	4.0-9.0 Mt CO2-e	8.6 Mt CO_2-e
LRET cost of abatement ($/t CO_2)	**37-111**	**n/a**	**55-80**	
Cost/subsidy equivalent under SRES scheme (A$m)	52-98	n/a	50-750	
Abatement under SRES	0.2-0.3 Mt CO_2	n/a	0.1-2.5 Mt CO_2-e	0.2 Mt CO_2-e
SRES cost of abatement ($/t CO_2)	**152-525**	**n/a**	**300-500**	
Cost/subsidy equivalent under overall RET (A$m)	335-556	3,944-3,982[9]	n/a	
Abatement under RET	4.3-8.0 Mt CO_2	34.6- 45.3 Mt CO_2-e	4.1-11.5 Mt CO_2-e	8.8 Mt CO_2-e
Overall RET cost of abatement ($/t CO_2)	**42-129**	**87-115**	**185-290[10]**	**30-70**

Sources: AEMC. 2011, *Impact of the enhanced Renewable Energy Target on energy markets*, Interim Report, 25 November 2011, Sydney

Daley, J., Edis, T. and Reichl, J. 2011, *Learning the hard way: Australia's policies to reduce emissions - Detailed Analysis*, Grattan Institute, Melbourne

Deloitte Access Economics. 2011, *Assessing the impact of key climate change policies on energy users*, Report for the Energy Users Association of Australia, June 2011, Canberra

Productivity Commission, 2011, *Carbon Emission Policies in Key Economies*, Research Report, Canberra

[6] The implicit abatement study is a measure of the cost effectiveness of an abatement option. It is calculated by dividing the subsidy equivalent by the abatement induced. The subsidy equivalent measures the outlays required to pay for certain amounts of abatement from particular sources and is therefore an 'upper-bound proxy' for the resource cost of a policy scheme.

[7] The AEMC estimated the cost of abatement by calculating the additional annualised operating and capital costs relative to the counter factual divided by the change in emissions.

[8] The cost of the schemes, the abatement achieved and the cost of abatement in terms of dollars per tonne are estimates for a given year (not cumulative) and therefore a range has been included to reflect differences over the years. All estimates are in 2010/11 dollars.

[9] Refers to the REC liability under the RET scheme on its own ($3,944m) as well as the REC liability under the RET scheme together with a carbon price ($3,982m).

[10] Refers to the average cost per t/CO_2 for the overall enhanced RET scheme, where the average cost by 2020 is estimated to be $185. The CIE estimated that the average abatement cost in 2010/11 was approximately $290 based on AEMC data.

A number of important points emerge from these comparisons:

- The overall RET cost of abatement ranges from $30 to $290 per tonne of CO_2
- The cost of the LRET is lower, ranging from $37 to $111 per tonne of CO_2
- The cost of the SRES is considerably higher, ranging from $152 to $525 per tonne of CO_2
- Each of these costs is higher than either the current or expected carbon price. The presence of the RET therefore raises the cost of abatement to the Australian economy as a whole.

Looking at the individual studies:

- The Access Economics report on the impact of climate change policies estimates that abatement cost under the RET is approximately $87-115/t CO_2-e at 2020.
- The Productivity Commission also evaluated the 'effective' carbon price or the cost of reducing greenhouse gas emissions of different carbon emission policies. The Commission estimated that the cost of abatement under the RET scheme was in the range of $42-$129 in 2009 and 2010. Although the study does not explicitly estimate the cost of the LRET and the SRES, it does measure the cost of abatement under the large-scale and small-scale component of the RET as it existed in 2010.
- The relatively lower cost of abatement estimated by the Grattan Institute is based on certificate prices. The cost per tonne of CO_2-e abated has ranged from $30-$40/t CO_2-e when certificate prices have been low (reached as low as $15 near 2007) to around $70/t CO_2-e when certificate prices have been high (reached a peak of $50 in 2008/09). The price of certificates collapsed by 2005 when the scheme was substantially over supplied with renewable energy and revived soon after 2007 when policy commitments were made to expand the target (Grattan Institute 2011).
- The cost of abatement for the overall RET scheme estimated by the Australian Energy Market Commission (AEMC) is significantly higher than other estimates. Importantly, the cost of abatement under the LRET estimated by the AEMC is in a similar range to that evaluated by the Productivity Commission, despite the use of entirely different approaches. However, as the AEMC takes an average of the abatement cost under the LRET and the SRES to estimate the cost of abatement under the overall enhanced RET, it is obvious that the SRES component of the RET is driving up abatement costs significantly.
- As AEMC note, estimating the cost of abatement under the SRES or other policies such as jurisdictional feed-in tariffs which support solar PV installations, is difficult as it is not possible to entirely disaggregate the abatement or the cost that should be attributed to one particular policy. For this reason, the costs of abatement under the SRES have been based on the costs of abatement from solar PV installations, which reflect the cost premium borne by the economy as a whole when replacing solar PV with grid-based electricity (AEMC 2011). In this way, the cost of abatement is measured by the economic resource cost of PV installations divided by the abatement these installations manage to achieve. The costs range from around $500/ tonne CO_2-e in 2010-11 to around $300/ tonne CO_2-e in 2019-20, highlighting that solar PV offers a relatively expensive means of achieving abatement. The high cost associated with the SRES therefore translates to a relatively high average cost of abatement under the overall enhanced RET scheme.

In summary, as the RET does not target greenhouse gas abatement directly, it is a high cost abatement measure. The focus under RET on renewable energies to abate emissions means that other lower cost abatement opportunities in the electricity sector or elsewhere in the economy are less likely to be taken up. Given Australia's carbon tax is now in place, the RET merely adds to the cost of achieving Australia's abatement target rather than producing additional abatement [11] and is not complementary to the carbon tax.[12] In short, the RET is no longer required given the existence of a national carbon pricing mechanism.

[11] Productivity Commission (2008), What Role for Policies to Supplement and Emissions Trading Scheme? Submission to the Garnaut Climate Change Review, Commonwealth of Australia, Canberra May, p XIV.
[12] Roger Wilkins (2008), Strategic Review of Australian Government climate change programs, 31 July, p 52.

1.4 Infant industries should not be subsidised by electricity users

A common argument put forward in support of a renewable energy target in addition to an efficient emissions abatement mechanism relates to industry development. This argument hinges on the notion that Australia will need a supply of renewable energy in the future and that the incentive provided by carbon pricing will be insufficient to deliver this. A related argument is the perceived need to accelerate the deployment of renewable energy beyond what carbon pricing would deliver.

Australia's capacity to meet future projected energy needs in a secure, cost effective and sustainable manner must continue to be underpinned by a competitive and efficient National Electricity Market (NEM). To achieve such an outcome, the ACA is a strong advocate of an open, competitive and integrated national electricity market that is:

- Governed by nationally consistent regulation of generation, transmission and distribution to promote efficiency and eliminate unnecessary costs and risks
- Transparent, with no artificial barriers to entry
- Non-discriminatory and therefore non-distortionary between energy sources
- Free of mandated targets, fuels or technologies, and
- Attractive to further investment in world's best practice generation and transmission capability and in new technologies to meet the burgeoning energy demands of the future while reducing greenhouse gas emissions.

Overall, the Government's draft Energy White Paper (EWP) core principles provide a sound conceptual foundation for energy policy in Australia. The coal industry particularly welcomes the emphasis placed on open, efficient and contestable energy markets; access to secure, reliable and competitively priced energy to underpin almost every facet of life in Australia's modern economy; and the core energy objectives.

While placing faith in markets and having regard to Australia's comparative advantage in energy resources, government policy settings inevitably must balance a range of competing issues and priorities. However, mandating technologies or fuels comes at a cost. To ensure least cost outcomes:

- There must be a strong emphasis on the use of a single, efficient emissions pricing mechanism
- Any additional subsidies need to be assessed on the basis of market failure criteria. That is, is a subsidy the best way to address the problem and avoid a sub-optimal outcome for society?

The RET is, in fact, legislated as a fixed target of 45,000 GWh of electricity to be generated from renewable energy sources by 2020. This target was established in 2009 to represent 20 per cent of projected generation in 2020. It is on top of the 15,000 GWh of renewable generation already existing in 2001, primarily from hydro generation sources. Because the target is fixed at 45,000 GWh of electricity it may, in fact, exceed the 20 per cent goal in 2020. On current projections it could be as high as 26 per cent.

ACIL Tasman has undertaken an assessment of the RET based on two scenarios:

- A base case outlook that reflects the legislated fixed GWh targets under the Large-scale Renewable Energy Target (LRET) and the uncapped Small-scale Renewable Energy Scheme (SRES)
- A "real" 20 per cent LRET in which the fixed GWh targets are reduced such that it reaches 20 per cent of anticipated liable demand by 2020.

The analysis focused on the direct costs upon electricity users under each scenario and found:

> *'In summary, the total direct cost upon households from the RET scheme under each scenario over the period 2012 to 2030 (in nominal terms) is $1,800 under the Base case and $960 under*

the Real 20% LRET. Therefore moving from the current scheme to a Real 20 per cent LRET is projected to save an average household a total of $840 over the period in nominal terms.' [13]

This study underscores the high cost of the RET and that modifications to it may adjust its financial impact but do not address the economic costs or inefficiencies inherent in mandating technologies and fuels for electricity production.

The most efficient option would be to abolish the RET and guarantee that existing property rights (including for waste coal mine gas used in electricity generation) are grandfathered or otherwise compensated.

In the absence of a decision to abolish the Renewable Energy Target, the Federal Government should instruct the Productivity Commission to review the full impact of the scheme for Australia's cost of abatement, energy market efficiency and energy security. The Productivity Commission's review should not be confined to the areas of inquiry set forth in the *Clean Energy Act,* namely industry assistance, fuel tax arrangements and carbon pollution reduction activities internationally.

Given the significant electricity market investment challenge in the longer term, all NEM jurisdictions need to work with the Australian Government and have a well thought out strategic plan, with actions, to ensure they do not operate in continual semi-crisis mode and that adequate capacity is available to meet all eventualities (eg a failure at or closure of one of the older coal-fired plants reducing local supply availability). Such a strategic approach will provide greater investor certainty and avoid a bias in favour of higher cost peaking/intermediate generation and against additional base load capacity. It will also guard against ad hoc interventions by government in the energy market as a result of concern about rising electricity prices that produce sub-optimal investment outcomes.

Such a strategic approach will also minimise policy uncertainty, which is essential for efficient investment to come forward to meet the investment challenge in ways that minimise costs for consumers.

Recommendation:

(1) The Federal Government should acknowledge that:

(a) The Renewable Energy Target (RET) is fundamentally bad policy because it mandates deployment of costly, mature technologies rather than supporting R&D and leaving the market to drive deployment

(b) The introduction of the carbon tax means that the RET is now simply adding to the cost of achieving Australia's abatement targets, rather than encouraging additional abatement

(c) The RET should be abolished and existing property rights (including for waste coal mine gas used in electricity generation) should be grandfathered or otherwise compensated.

2 THE HIDDEN COSTS OF THE RENEWABLE ENERGY TARGET

2.1 Impact on electricity prices

The cost components of supplying electricity include:

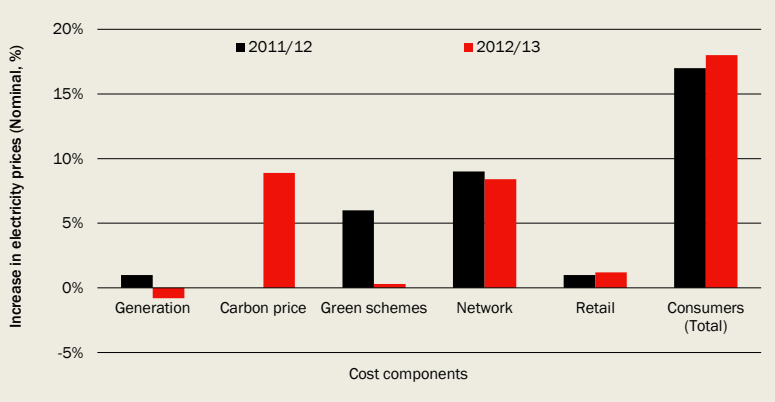
- Network costs – the transport of electricity from the generators to customers via the transmission and distribution networks

[13] ACIL Tasman (2012), Achieving a 20% RET: Costs of current legislation and possible modifications, Prepared for TRUenergy, 5 September, p V.

- Energy costs including:
  - The purchase of electricity from the generators on the wholesale electricity market
  - Compliance with several climate change mitigation schemes as required by Federal and State governments
  - The introduction of the Commonwealth Government's carbon pricing mechanism, which commenced on the 1 July 2012 at a fixed price of $23 per tonne of CO_2 emissions, will increase wholesale electricity costs
- Retail costs – running the retail business (includes call centre costs, billing costs etc.) and making an appropriate return on capital.

Chart 2.1 summarises the contribution of each of these components to total price increases in 2011-12 and 2012-13.

Chart 2.1: Drivers of increase in average regulated retail electricity prices across NSW



Data source: IPART 2011, *Changes in regulated electricity retail prices from 1 July 2011. Electricity – final report*, June 2011, NSW and IPART 2012, *Changes in regulated electricity retail prices from 1 July 2012. Electricity – final report*, June 2012, NSW

As can be seen from Figure 2.1, in 2011-12, the cost of purchasing electricity from the generators increased only modestly and accounted for a small proportion of the total increase in regulated electricity prices. In contrast, green scheme costs increased sharply. Green scheme costs refer to the costs of complying with various mandated government schemes designed to mitigate the growth in carbon emissions. After network costs, the increases in green scheme costs were responsible for the largest increase in average regulated prices in 2011-12 (6 per cent). That is, one third of the total increase in average regulated prices came from the increase in green scheme costs (IPART 2011).

The RET scheme is largely responsible for the increase in green scheme costs. The costs of abatement and thus complying with the scheme have increased significantly since 2010 (raising electricity prices by 6 per cent in 2011-12). These costs are influenced by small-scale solar subsidies offered by State and Federal Governments and include subsidies under the RET (financial incentives such as renewable energy certificates). Importantly, the RET scheme is paid for through higher electricity prices and therefore places a significant burden on consumers.

While the costs of complying with green schemes increased significantly over the past two years, they will remain relatively stable in 2012-13. However, the RET scheme will continue to be a substantial cost to electricity retailers and their customers. In the coming year, they will be required to surrender renewable energy certificates equivalent to 33.1 per cent of their total electricity sales – a cost that will be passed on to customers in the form of higher retail prices.

In considering energy policy and greenhouse gas abatement it is best to:

- Have regard to Australia's comparative advantage in fossil fuel

- Identify any artificial barrier, market failures or impediments and remove them at their source
- Be non-discriminatory and non-distortionary in terms of energy sources.

Commercial decisions will then be impacted more by market signals than undue bias induced by distortions to these signals.

However, the RET impacts most significantly on the operating costs of companies that are significant energy users. In the Australian economy, with its comparative advantage in fossil fuels, this impacts on a key business input (energy). This is contrary to a fundamental principle of economic reform: there should be no taxes on business inputs.

2.2 Impact on energy security

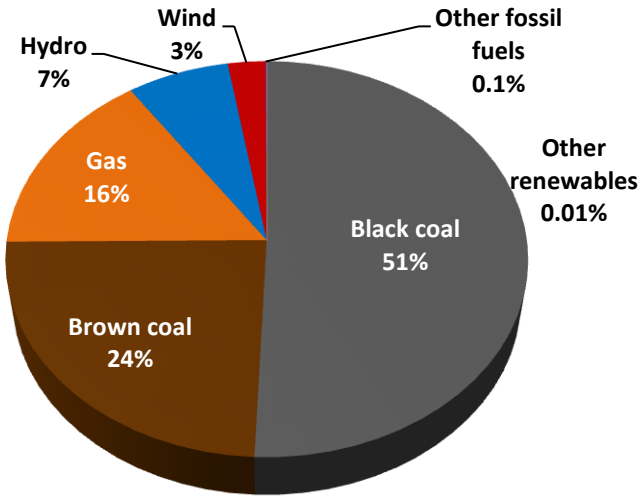
Public discussions of climate change policy frequently overlook or understate the ongoing importance of coal to Australia's energy security. There are three aspects of energy security:

- Adequacy – the provision of sufficient energy to support economic and social activity
- Reliability – the provision of energy with minimal disruptions
- Affordability – the provision of energy at a price which does not adversely affect the competitiveness of the economy and which supports continued investment in the energy sector.[14]

Coal underpins the standard of living of all Australians because it is our principal source of affordable, reliable, baseload power. This baseload power typically operates at a 75 to 90 per cent annual capacity factor, compared to peaking plant that operates at annual capacity factors of between 1 and 10 per cent.[15] There is no other fuel – fossil or renewable – that can perform this vital competitive role in Australia's power generation mix.

Currently, black and brown coal provides 75 per cent of electricity produced in Australia for public consumption. Gas accounts for 16 per cent, hydro 7 per cent, wind 3 per cent and other renewables one-tenth of one per cent (see Chart 2.2 below).

Chart 2.2 Percentage share of electricity production in Australia for public consumption (excluding generator use) by fuel type, 2010-11



Source: ESAA, *Electricity Gas Australia 2012*

[14] Department of Resources, Energy and Tourism, *National Energy Security Assessment,* 2011, p. 2. <http://www.ret.gov.au/energy/Documents/Energy-Security/nesa/National-Energy-Security-Assessment-2011.pdf>

[15] AGL (2012), Submission to the NSW Parliament's Public Accounts Committee Inquiry into energy generation, p 2.

While modelling by the Bureau of Resources and Energy Economics points to a decline in the share of coal in domestic electricity generation, it will still be the largest single source of Australia's power in 2035. Black and brown coal are projected to account for 38 per cent of total gross electricity generation output in the low gas price scenario, and 52 per cent in the high gas price scenario. (NB that these projections assume that carbon capture and storage is not yet commercially viable).[16]

International experience shows that raising a nation's share of renewables through regulation imposes hidden costs. Because renewable fuel sources are generally intermittent and electricity cannot be stored large-scale for future use, renewables must be backed up by conventional fuel sources – whether coal, gas, hydro or nuclear. In other words, there must be sufficient generation capacity to meet electricity demand when the contribution from wind or solar photovoltaic is low.

International experience shows that as a country's share of renewables increases, additional investment in baseload power sources is needed to enable them to ramp up and down quickly to support fluctuations in renewable output. For example, Germany has recently opened the world's largest brown coal power station, which has been specifically designed to support renewables in the grid.[17] Also, Germany has a geographically dense electricity grid, and can import nuclear power from France if additional baseload generation is required.

In contrast, Australia has a highly dispersed grid and no access to external baseload power sources. And while Australia relies on coal for three-quarters of its electricity generation, there are no plans in Australia to commission new coal-fired power stations, either to replenish our ageing fleet or to supplement renewables. Ironically, the disincentive to additional investment in coal-fired generation that is imposed by the RET will only exacerbate the grid stability problems that accompany a rising share of renewables in electricity generation.

Further, it is not generally understood that coal will remain central to any adequate, reliable and affordable energy policy designed to meet climate change goals. That is not just the case for Australia but more broadly for the world economy because:

> *'From the perspective of energy security … there's little scope – at least at present – for economies to replace a significant fraction of their fossil fuel energy.'* [18]

Most of the benefits of modern life, including transport, industry, heating and cooling, require a secure, affordable and uninterrupted supply of energy. Climate change policymaking must give due regard to this fact, and clearly set forth to the public the full cost and complexity involved in making radical changes to Australia's energy mix.

3 AN EFFECTIVE CLIMATE CHANGE POLICY MUST BE CONSISTENT WITH INTERNATIONAL EFFORTS AND AUSTRALIA'S COMPARATIVE ADVANTAGES

The ACA accepts the science of anthropogenic global warming and the need for concerted policy action. The Association also supports the role of a long-term carbon pricing mechanism to reduce Australia's greenhouse gas emissions, provided the carbon price mechanism is efficiently and fairly designed, and is calibrated with the abatement efforts of the world's major greenhouse gas emitters and our trade competitors. Unfortunately, the Federal Government's carbon tax package – as currently designed – neither facilitates low cost abatement nor maintains the international competitiveness of Australian firms.

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[16] Bureau of Resources and Energy Economics (BREE), *Australian Energy Projections to 2034-35,* December 2011, pp. 36 and 42. <http://bree.gov.au/documents/publications/energy/Australian-Energy-Projections-report.pdf>

[17] RWE, *Efficient and highly flexible: BoA 2&3 makes important contribution to transforming German energy industry and climate protection,* Media release, 15 August 2012. <http://www.rwe.com/web/cms/en/2320/rwe-power-ag/press-releases/press-release/?pmid=4008220>

[18] Australian Strategic Policy Institute (2011), *Keeping the home fires burning: Australia's energy security*, December, p 16.

3.1 Flaws in the Federal Government's carbon tax package

3.1.1 Inclusion of fugitive emissions from coal mines

Australia is the only coal exporter in the world to impose a tax on coal mine fugitive emissions – the greenhouse gases released as coal is mined and broken up. Neither the European Union nor the USA does this, even though they individually emit more greenhouse gases from coal mining than Australia.

Fugitive emissions vary enormously from mine to mine and represent 5 to 6 per cent of Australia's total greenhouse emissions. To put that in perspective, methane emissions from livestock are 11 per cent.

There are no technological quick-fixes to abate fugitive emissions from coal mining, with available technologies only able to deal with up to 40 per cent of coal mine fugitive emissions. In particular:

- Methane in air is explosive in concentrations between 5 and 15 per cent, so it is imperative that methane levels in underground coal mines are kept well below this level (eg, less than 1 per cent). In gassy underground mines, methane is "pre-drained" prior to mining and there are existing commercial technologies for the safe abatement of much of this methane
- The residual gas after pre-drainage is kept below the safety limit by diluting it with a sufficient volume of ventilation air. This safety measure leads to very large volumes of ventilation air methane (VAM) with extremely low methane content. Currently there is no commercially available, safe abatement solution for VAM emissions.
- There are no known means for fugitive emissions abatement in operating open cut coal mines.

As illustrated in Table 3.1, Australia's Clean Energy Future carbon pricing arrangement is the most expensive in the world, locking in significant extra costs for Australian exporters. The global coal market is extremely competitive. Imposing a punitive and unilateral carbon tax on the Australian coal industry simply diminishes our competitive advantage for no environmental benefit. Consequently, any loss in coal supply from Australia will be made up by increased production by our competitors in countries such as Canada, Colombia, Indonesia, Mongolia, Mozambique, Russia, South Africa and the USA. This follows because world minerals supply responds to relative prices and does so reasonably quickly.

The Federal Minister for Resources and Energy, the Hon Martin Ferguson, recently stated:

> *'The real message to us with the lower commodity prices is that the fat within the commodity system has gone.*
>
> *'We as a nation must be conscious of the cost of delivery of projects in Australia. … Our first priority is to employ and train Australians, we've got to do everything we can to deliver the cost of delivery of projects in Australia because there's plenty of competition coming our way – look at Indonesia and coal, look at potentially into East Africa in terms of the petroleum industry, Africa generally in terms of a variety of commodities.*
>
> *'No one owes Australia a living.'* [19]

The highly competitive nature of the coal industry is illustrated by the growth of Indonesia's coal exports over the past few years. In 2006, Indonesia surpassed Australia to become the world's largest exporter of thermal coal; and in 2011 its total exports of coal, of 309 million tonnes, exceeded Australian exports. [20] Indonesia has been able to expand its production and win market share from Australia, which has been constrained by lack of export infrastructure capacity.[21]

[19] The Hon Martin Ferguson AM MP, Minster for Resources and Energy, Contract For Closure Negotiation Announcement, Melbourne, 4 September 2012

[20] International Energy Agency 2012, Coal Information 2012, p II-10.

[21] International Energy Agency, *World Energy Outlook 2011*, p. 435.

The International Energy Agency forecasts that despite short-term uncertainty about economic growth, world energy demand will increase strongly by one-third between 2010 and 2035.[22] By 2035, global use of coal is projected to be one-quarter higher than in 2009 and coal will remain the 'backbone' of electricity generation.[23] Faster rates of growth in the population and output of emerging economies will continue to drive world coal demand upwards. Consequently, if the Federal Government maintains a one-sided carbon tax on coal exports, then Australia will forgo jobs and income without contributing to any net reduction in global greenhouse gas emissions.

Table 3.1: Carbon price coverage of coal mining fugitive emissions in seven major coal exporting nations, 2011

	Mt coal exported	Carbon tax (A$/tonne CO_2)	Carbon price in place
Indonesia	309	0	None under active discussion
Australia	**284**	**$23**	**Most expensive in the world**
Russia	124	0	None proposed
USA	97	0	None in coal mining states. (A$1.85 in Regional Greenhouse Gas Initiative States[(a)])
Colombia	75	0	None proposed
South Africa	72	0	Discussion of carbon tax ~A$8/tonne CO_2

Note: (a) The Regional Greenhouse Gas Initiative (RGGI) is a cooperative effort amount ten US states to reduce emissions from the power sector. It does not apply directly to fugitive emissions from coal mining. The major coal producing states in the US of Wyoming, West Virginia, Kentucky, Pennsylvania and Montana do not participate in the RGGI.

3.1.2 High fixed carbon prices to 1 July 2015

The ACA has long argued that introducing a carbon tax will affect the competitiveness of individual coal mines. As currently legislated, the carbon tax will rise by 2.5 per cent per annum in real terms from a starting rate of $23/tonne. On 1 July 2015, the carbon tax will transition to a cap and trade scheme, linked to the EU carbon market. While the EU price is currently around A$9/tonne, the carbon tax locks in fixed carbon prices for the next three years that will culminate at a price of A$25.40 plus inflation.

3.1.3 Restrictions on international trade in permits

If the Australian economy is to maintain its comparative advantage in low cost energy sources, then energy and emissions reduction policies must work together to drive efficient markets that encourage the most cost-effective energy solutions. As the Productivity Commission has pointed out, the most effective solution will involve international trading in permits:

> *'Crucially — and this point seems not to be widely understood – it will not be efficient from a global perspective (let alone a domestic one) for a carbon-intensive economy, such as ours, to abate as much as countries that are less reliant on cheap, high-emission, energy sources.'* [24]

The Government recently announced that the Australian scheme will be linked with the European Emissions Trading Scheme (ETS) removing the proposed fixed floor price from 2015 and effectively making the EU price the "floor price". The Government has also placed

[22] International Energy Agency, *World Energy Outlook 2011,* p. 39.
[23] International Energy Agency, *World Energy Outlook 2011*, p. 380.
[24] Gary Banks, *Comparing carbon prices internationally: the 'challenges'*, presentation to the Australian Industry Greenhouse Network-Business Council of Australia Carbon Pricing Forum, Parliament House, Canberra, 23 March 2011, p 10. <http://www.pc.gov.au/__data/assets/pdf_file/0005/107159/comparing-carbon-internationally.pdf>

a limit of 12.5 per cent on the amount of low cost carbon offsets generated under the Clean Development Mechanism that can be used to acquit a liability under the scheme.

The decision to remove Australia's fixed floor price is a small step in the right direction insofar as it indicates the government is willing to consider amendments to the scheme. But it effectively relinquishes control over Australia's carbon price to the EU, reduces the opportunity to purchase low cost abatement and does not address the fundamental flaw in the Australian scheme: that it damages the competitiveness of the coal industry and places Australian industry in general at a competitive disadvantage to its international competitors.

Even with the Australian price being pegged to the European price, Australian industry will still be disadvantaged compared to Europe. The Australian scheme has broader coverage (and includes coal mine methane emissions, which are excluded from the EU ETS), and the European scheme provides far greater support to its export industries.

In any case, the more relevant comparison is between the Australian carbon price and the carbon price seen by our international coal exporting competitors as shown in Table 3.1.

3.1.4 Exclusion of the coal industry from transitional assistance

The Government acknowledges that coal is one of the most trade-exposed industries in Australia. In fact, under the earlier Carbon Pollution Reduction Scheme (CPRS) legislation coal was eligible for emissions-intensive, trade-exposed (EITE) transitional assistance using the Government's own rules. Nonetheless, coal was unfairly excluded from such assistance although there remained the possibility for a later review to include it in the EITE arrangements.

The industry is deeply concerned to see blatant discrimination against the coal industry enshrined in section 145 (3) of the *Clean Energy Act 2011*. The clause has the effect of permanently locking coal mining out of the transitional assistance arrangements regardless of future market conditions or the outcome of any Productivity Commission Reviews of the effectiveness and scope of the EITE arrangements:

Section 145 (3) The Jobs and Competitiveness Program must not provide that the extraction of coal is an activity that, under the program, is taken to be an emissions-intensive trade-exposed activity.

This is a dramatic shift from the previous CPRS legislation, which left open the inclusion of coal mining at a future date should conditions in the industry change.

EITE status should not be a once-and-for-all decision. Transitional assistance arrangements for coal should be considered as part of the planned reviews of the scheme arrangements. This would enable the effects of international action to put a price on carbon in coal competitor nations, of a rise in domestic relative to overseas carbon prices and of falling commodity prices to all be taken into account in assessing the adequacy of the transitional assistance arrangements.

3.2 The significance of Carbon Capture and Storage (CCS) for reducing Australia's CO_2 emissions

Both the RET and the Federal Government's carbon tax package discriminate against CCS, a technology that is essential to reducing CO_2 emissions from the use of fossil fuels. CCS involves capturing CO_2 from a large emissions source, compressing it, transporting it to a suitable site, and injecting it into deep geological formations for safe and permanent storage.[25]

CCS is the only technology that can significantly reduce CO_2 emissions from the use of fossil fuels. It is applicable to power generation (from coal, gas, diesel, fuel oil or biomass),

[25] National CCS Council, Carbon Capture and Storage (CCS) in Australia – Contributing to a Clean Energy Future, 7 December 2011, p. A-1.
<http://www.ret.gov.au/energy/Documents/ewp/draft-ewp-2011/submissions/215.%20NationalCCSCouncilpart2.pdf >

production of industrial goods (such as iron and steel, cement and fertiliser), coal-to-liquids processes, oil refining and natural gas processing.[26]

The International Energy Agency considers that:

> '*[I]ntensive investment and effort to demonstrate the commercial viability of CCS is the rational course of action for governments seriously intent on restricting the average global temperature rise to no more than 2^0C.'* [27]

In the IEA's '450 Policy Scenario' (where strong international commitments are made to constrain the increase in the average global temperature to 2^0C), the share of CCS in annual global abatement rises rapidly from 3 per cent in 2020 to 22 per cent in 2035. But If CCS is taken out of the equation, the IEA projects that *'overall costs to reduce emissions to 2005 levels by 2050 increase by 70%.'* [28] A recent meeting of IEA Energy Ministers confirmed the essential role for CCS in CO_2 abatement.[29]

Federal Treasury forecasts that with a carbon price in place, Australia's emissions will be 566 Mt of CO_2-e in 2050. Sensitivity analyses by SKM MMA Consultants and ROAM Consultants suggest that if CCS is not available, then domestic emissions could be approximately 40 per cent higher in 2050. Therefore without CCS, Australia could be forgoing up to 230 Mt of CO_2 storage in 2050. Similarly, the Draft Energy White Paper has flagged that Australia will be dependent on coal-fired power stations past 2035 and has in fact assumed that CCS will be in place by then.[30]

The individual elements of CCS technology are well-proven. The task for CCS, like all new low emissions technologies, is to significantly reduce the cost of commercial scale plant, along with confirming sizable storage capacity close to major emission sources. The Australian coal industry established the COAL21 Fund in 2006 to facilitate the demonstration of low emissions technologies applicable to coal, including CCS. The industry recognises the important role that the CCS Flagships Program is playing in promoting commercial scale demonstration of these technologies and strongly supports its continuation.

Just as there is limited understanding of the importance of coal as Australia's greatest energy resource, so also do few fully grasp the reality that coal must be the cornerstone of any adequate, reliable and affordable climate change policy. Australia's dependence on fossil fuels means that we have – as Professor Garnaut has described it – a 'strong comparative advantage' and a 'strong national interest' in applying CCS.[31]

As noted above, renewables are generally intermittent and must be supplemented by conventional baseload and peaking power. If climate change policy settings fail to facilitate the deployment of coal and gas fired electricity with CCS at scale, then other options, such as nuclear power, will have to be explored.

3.3 Complementary measures must address market failures not covered by the carbon pricing mechanism

3.3.1 Clean Energy Finance Corporation

The ACA recognises that meeting Australia's emissions reduction targets will require a fundamental and unprecedented transformation of our energy sector – and this is not something that will be delivered by the Government's carbon tax alone. It is therefore critical

[26] National CCS Council, Carbon Capture and Storage (CCS) in Australia – Contributing to a Clean Energy Future, 7 December 2011, p. A-1. <http://www.ret.gov.au/energy/Documents/ewp/draft-ewp-2011/submissions/215.%20NationalCCSCouncilpart2.pdf >
[27] IEA, World Energy Outlook 2011, p. 242.
[28] International Energy Agency (IEA), *Technology Roadmap: Carbon capture and storage*, 2009, p 4. <https://www.iea.org/papers/2009/CCS_Roadmap.pdf>
[29] International Energy Agency, *Tracking Clean Energy Progress: Energy Technology Perspectives 2012 excerpt as IEA input to the Clean Energy Ministerial,* 2012. <http://www.cleanenergyministerial.org/pdfs/Tracking_Clean_Energy_Progress.pdf>
[30] Commonwealth of Australia, *Draft Energy White Paper 2011: Strengthening the foundations for Australia's energy future, December 2011,* p. 84. <http://www.ret.gov.au/energy/Documents/ewp/draft-ewp-2011/Draft-EWP.pdf>
[31] Ross Garnaut, The Garnaut Review 2011: Australia in the global response to climate change, Final Report, 31 May 2011, p 122. <http://www.garnautreview.org.au/update-2011/garnaut-review-2011/garnaut-review-2011.pdf>

that tax revenue is invested in the development and deployment of a portfolio of solutions that will provide secure, reliable and low emission energy supply for the future.

With $10 billion at its disposal, the Clean Energy Finance Corporation (CEFC) has the potential to play a role in delivering these solutions and thereby contribute to the broader objectives of the Government's Clean Energy Future Plan. The success of the CEFC in realising this potential will be enhanced only if it has the flexibility to invest in all low emission technologies, including CCS.

The decision to exclude CCS from accessing the CEFC is inconsistent with the potential of CCS to contribute to Australia's domestic abatement efforts. It is also contrary to Australia's strategic and economic interests as the world's largest exporter of coal and a major exporter of liquefied natural gas (LNG). Including CCS in the CEFC's scope would represent an opportunity for Australia to use carbon tax revenue to contribute to the development of a technology which will be an essential part of a global response to climate change.

Given the enormous potential of CCS to Australia given its comparative advantage in fossil fuels, it is more than surprising that CCS has received considerably less funding support than other low emission technologies. Renewable technologies have access to the $3.2 billion managed by the Australian Renewable Energy Agency as well as the estimated $20 billion in indirect support provided by the 20 per cent renewable energy target. According to Treasury modelling, this will provide the foundation for renewable energy to deliver an estimated 40 per cent of Australia's electricity mix in 2050. In contrast, CCS is receiving less than $2 billion to deliver a potential 30 per cent of the electricity mix. The exclusion of CCS from the CEFC exacerbates the current funding imbalance and handicaps the development of a key low emission solution.

3.3.2 The Energy Efficiency Opportunities (EEO) scheme

The Productivity Commission has argued that:

> *'In the presence of an ETS to target GHG emissions directly, energy efficiency policy should be refocused on efficiently addressing any barriers to the uptake of energy efficiency opportunities.'* [32]

In this light the Australian Government should clearly establish the market failure being addressed by the existing EEO legislation and its proposed extension to cover greenfield and major expansion projects. It should only proceed with the extension if the Regulation Impact Statement process establishes that the costs imposed exceed the benefits.

Recommendations

(2) The Federal Government should rectify the significant flaws of the current carbon tax package by:

- *(a) Aligning Australia's climate change policy approach with international action and allowing unrestricted access to international permits*
- *(b) Adopting a phased approach to the auctioning of emissions permits for trade-exposed industries*
- *(c) Phasing in the inclusion of coal mine fugitive emissions in step with Australia's coal export competitors and over a time frame consistent with the development of fugitive abatement technologies from their current experimental stages to safe, reliable, deployable equipment and processes at commercial scale*
- *(d) Removing inefficient programs that are no longer required in light of the introduction of the carbon price. Should the Clean Energy Finance Corporation be objectively assessed as efficiently addressing clearly established market failures, it should be expanded to include all low emissions technologies, including carbon*

[32] Productivity Commission (2008), What Role for Policies to Supplement and Emissions Trading Scheme? Submission to the Garnaut Climate Change Review, Commonwealth of Australia, Canberra May, p XVIII.

capture and storage projects. The Energy Efficiency Opportunities scheme should be refocused to address only demonstrable barriers to the uptake of energy efficiency opportunities

(e) Ensuring any measures do not adversely impact the international competitiveness of Australian industry and provide necessary transitional assistance to coal and all other export and import competing industries

(3) Establish an efficient, long-term carbon pricing mechanism as part of an international agreement that includes all the world's major greenhouse gas emitters. This long-term price should be complemented by measures to support substantial private investment in a broad range of low emissions technologies, including those applicable to fossil fuels.

4 WIDER CONTEXT OF THE RENEWABLE ENERGY TARGET REVIEW

Climate change as a result of human induced greenhouse gas emissions is a serious international challenge. Successive Australian Governments have recognised that this challenge has to be addressed as part of a binding, United Nations convention or treaty. Australia's domestic policy approach has emphasised the need to employ a suite of sustainable, long-term policies and measures consistent with Australia's international obligations.

We need a reality check. Meeting key environmental and energy supply challenges involves trade-offs. Moreover, all low emission technology solutions will be costly. To keep the costs of action as low as possible there must be a strong emphasis on the use of market-based instruments. Such policy instruments can only represent part of the solution and a broader, national climate change policy framework is required comprising:

- Technology development, demonstration and deployment – including a nationally coordinated low emissions technology strategy:
- A mechanism to address market failures in the provision of associated energy infrastructure for CO_2 transport and for electricity transmission from new energy generation activities
- Adaptation policies for industry and, more broadly, Australian society to evolve in the face of new circumstances and conditions resulting from climate change
- An international approach recognising individual country circumstances, including that Australia faces greater costs and risks from meaningful carbon abatement than non-energy-intensive economies. Such an approach will ensure that:
  - Australia's climate change policies form part of a realisable international solution to the impacts of human induced greenhouse gas emissions, and
  - Australia's carbon pricing mechanism is capable of being efficiently linked to both individual country and regional initiatives as these evolve to a more broad-based international pricing regime, and
- Communication of :
  - The rationale for each element of climate change policy based on economic efficiency, environmental effectiveness and equity criteria
  - How each element is consistent with established high-level principles designed to minimise the inevitable increase in costs to households and trade exposed industry, and
  - How each element will minimise adverse environmental, equity and efficiency effects while ensuring Australia remains on track to achieve its long-term abatement targets without compromising Australian industry's international competitiveness.

Australia has a comparative advantage in its natural endowment of coal resources and reserves. But this is, of itself, insufficient to maintain competitive strength in an increasingly globalised economy and industry. There are no guarantees that Australia's comparative

advantage will secure its inclusion in any international company's global strategic consideration of where best to locate its operations to supply global markets.

Multinational businesses are under increasing pressure to justify Australia as a strategic location for corporate mining and minerals processing, irrespective of whether they are Australian or foreign owned. In addition, Australia faces considerable competition as a supplier of coal to markets in a variety of export markets and predominantly in Asia. In this environment, Australian coal producers continuously have to drive down costs in every area of their operations and adopt new and improved technologies to maintain competitiveness.

The industry has demonstrated its preparedness to confront these challenges. However, its future performance will also depend to an important degree on economic conditions in Australia maintaining that competitive edge given increased globalisation of the industry.

In the context of the competitive challenges facing the industry, it is vital that energy market reform continues to be undertaken. Such reform should have regard to Australia's comparative advantage in fossil fuel, its underpinning of Australia's base load power supply for the foreseeable future and the need to adopt a principled framework to ensure the reforms yield outcomes that are of net benefit to Australia in the context of the growth and investment prospects for coal mining activities.

Attachment A

MINERALS SECTOR STATEMENT OF PRINCIPLES ON CLIMATE CHANGE POLICY

The minerals industry acknowledges that sustained global action is required to reduce the scale of human induced climate change.

A measured transition to a low emissions global economy will require the alignment of three key policy pillars:

a global agreement for greenhouse gas emission abatement that includes emissions reduction commitments from all major emitting nations;

market-based policy measures that promote the abatement of greenhouse gas emissions at the lowest cost, while minimising adverse social and economic impacts, including on the competitiveness of the internationally traded sector;

substantial investment in a broad range of low emissions technologies and adaptation measures.

In the absence of a global agreement in the near term, the imperative for all nations is to sustainably reduce the production and consumption of greenhouse gas emissions without compromising international competitiveness, energy security and economic growth, improved living standards and poverty alleviation.

A measured transition to a low carbon economy can be accomplished by a variety of policy mechanisms that integrate all of the following design features:

Clear, predictable and long-term price signal – ensure that carbon price signals influence producers and consumers such that emissions and carbon consumption are reduced, and the focus on low carbon technologies is increased

Broad based – cover the broadest possible range of greenhouse gas emission sources, sinks and low carbon energy options.

Internationally competitive –progressively reduce emissions without distorting trade and investment flows or compromising the international trade competitiveness of Australian industry.

Revenue neutral – the objective is to establish a carbon price signal to change behaviour not raise revenues – if revenues are raised, they should be used to provide assistance to individuals and firms adversely affected by the policy measures, not be diverted into general revenue.

Simple and effective – to achieve sustainable emissions reductions at least economic cost, and be simple to implement.

Measured, equitable transition –to avoid adverse economic and social consequences, ensure continued energy security and provide equitable treatment of existing investment and greater certainty to new investment. Transitional measures to maintain trade competitiveness should be non-discriminatory.

Technology – encourage the adoption of the most efficient low emissions technologies through a carbon price signal, and fiscal measures where market failure can be demonstrated.

Consultation on these policy measures should be conducted in an open and transparent way, and include genuine consultation with all stakeholders.