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CAPS AND TARGETS REVIEW: *ISSUES PAPER, APRIL 2013*

APPEA Submission

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KEY POINTS

- APPEA's views on climate change policy, including the issues under consideration in this Review, are informed by our *Climate Change Policy Principles*. These principles underpin APPEA's views on appropriate climate change policy responses including the key objective of climate change policy development:

  APPEA supports a national climate change policy that delivers abatement at least cost and facilitates investment decisions consistent with there being an international price on carbon.

- Most relevantly for this Review, Australia should make an equitable contribution, in accordance with its differentiated responsibilities and respective capability to global action, to reduce greenhouse gas emissions.

- Natural gas contributes to this goal through displacing the use of carbon intensive forms of energy such as coal.

- The export of natural gas (in the form of liquefied natural gas (LNG)) is a trade exposed activity that competes against suppliers from countries where there are no constraints on greenhouse gas emissions.

- The upstream oil and gas industry provides significant economic and social benefits within Australia.

- *Australia's emissions*: As the *Issues Paper* notes climate change is a global issue and that it is the relevant level of absolute concentration of greenhouse gases in the atmosphere that matters to global climate outcomes, it is inappropriate for the Authority to focus on per capita emissions levels as a comparator for Australia's emissions level. The Authority should **discontinue any reference to per capita emission levels and instead focus the Review using a more appropriate measure of Australia's emissions level** – absolute emissions levels, emissions as a proportion of GDP or similar.

- *Emissions reduction targets*: While Australia should engage the international community in pursuing identified and beneficial environmental outcomes through greenhouse gas emissions reduction action, the conditions for Australia to move beyond the existing agreed 5 per cent reduction target have not been met. **The Authority's Review should not recommend a move away from the 5 per cent reduction target**.

- *Accounting*: Any carry-over of extra emissions units (arising from a country having a lower emissions level than its Kyoto targets) should be used to **expand the cap or banked for use** against future emissions targets.

- *International action*: A key area of focus for Australia's upstream oil and gas industry, particularly the export-focused LNG industry, **is the action of Australia's trade competitors**. Whether (or not) Australia's trade competitors are taking action that has implications for the costs faced by industry is one of the key factors to consider when assessing any changes to Australia's emissions reduction targets

  - Of the top 20 LNG exporting countries, 12 have not made pledges under Cancun Agreements. Those 12 countries accounted over 75 per cent of global LNG exports in 2011. This includes Qatar, one of Australia's major LNG competitors and the world's largest exporter of LNG (with more than 30 per cent of global exports)

- **This means very few of Australia's major LNG competitors are taking on emissions reduction obligations. Indeed, none have policies in place that impose an "effective" carbon price on their LNG exporters.**

- It is important that the Review recognise that the **situation facing many individual trade-exposed industries differs from broad economy-wide aggregate comparisons**. The Review must also recognise the competitive position facing individual industries, not just broad action or intention to act at the economy-wide level. It is the actions of key competitor countries that count, not just the action of so-called "major economies/emitters".

- *Economic and social implications*: Of any emissions budget, trajectory and targets are key considerations for the Review:

  - The level of economic 'effort' required to meet Australia's commitments and how that level of effort/commitment compares to other countries (comparable effort), is a key way to assess the appropriate (and defensible) level of Australian 'ambition'
  - It is difficult to determine, on face value, the level of emissions reduction effort involved in meeting climate change commitments. A useful means of assessing comparable effort can be made from examining how a country's commitments diverge from its 'no commitment' emissions baseline
  - **Rather than implying Australia needs to consider a move away from its existing target, an analysis of the implications of the existing target for Australia's economic and social conditions shows that most other advanced countries have to significantly increase their pledges if a future international agreement is to reflect a fair distribution of comparable effort from Australia's point of view.**

- *Australia's emissions reduction opportunities*: The emissions reduction opportunities available in Australia and how they change over time will be a key determinant of the economic and social impacts of any given target and trajectory. APPEA encourages any consideration of Australia's emission reduction opportunities to be broad-ranging and comprehensive and be developed through a comprehensive consultation process with industry. Previous attempts to consider these issues have suffered from a range of serious shortcomings which mean the analysis is of little use for this Review. **The Authority should commission its own analytical work to inform its conclusions.**

- *The policy mix*: some policies will reduce emissions more cost-effectively than others. APPEA refers to its submissions to the Authority's Review of the Renewable Energy Target, **which comprehensively showed that the combination of the Renewable Energy Target with a Carbon Pricing Mechanism is <u>not</u> the most cost effective way to meet Australia's emissions reduction target**. Any modelling undertaken by the Authority should consider a scenario where an emissions reduction target is met through a carbon price alone. The economic implications of this scenario should be compared with scenarios where the current (and less efficient) policy mix is used.

- *International trade in emissions units*: the ability to trade permits internationally offers a mechanism to reduce emissions in a cost effective manner. **Any restrictions on the flow of credible emissions units between international jurisdictions should be removed**. Any economic modelling commissioned by the Authority consider the implications for the economy of these restrictions.

- *Relationship with the target, trajectory and carbon budget*: It is inefficient and inequitable for the economic efforts required to meet emissions reduction targets to be made by the covered sectors only. **APPEA recommends that any additional measures targeted at reducing greenhouse gas emissions should only apply to sectors of the economy that are not covered by the Carbon Pricing Mechanism (or a comparable national approach)**. Measures should be introduced to ensure that the uncovered sectors make an equitable contribution to meeting Australia's emissions reduction targets.

- *Future progress*: The level of future covered and uncovered emissions is uncertain. It is the case, however, that the growth of Australia's LNG industry will, in coming years, see its contribution to Australia's emissions profile increase. However, in considering Australia's emission reduction targets and indeed Australia's contribution to global emissions reduction efforts, it is important to acknowledge the positive contribution Australia's LNG exports make now and will increasingly make to that global effort. **Australia's LNG industry is in a unique position to contribute substantially to the economic development of the nation and reduce global greenhouse gas emissions.**

1. INTRODUCTION

The Australian Petroleum Production & Exploration Association (APPEA) welcomes the opportunity to provide comment on the Caps and Targets Review *Issues Paper, April 2013*, issued by the Climate Change Authority on 23 April 2013.

APPEA is the peak national body representing Australia's upstream oil and gas exploration and production industry. The Association has more than 80 full member companies, all of which are oil and gas explorers and producers active in Australia. These companies account for an estimated 98 per cent of the nation's petroleum production. APPEA also represents more than 250 associate member companies that provide a wide range of goods and services to the upstream oil and gas industry. Further details about APPEA can be found at our website – www.appea.com.au.

APPEA's views on climate change policy are informed by our *Climate Change Policy Principles*. These principles underpin APPEA's views on appropriate climate change policy responses including the key objective of climate change policy development, which is

> *APPEA supports a national climate change policy that delivers abatement at least cost and facilitates investment decisions consistent with there being an international price on carbon.*

A copy of APPEA's *Climate Change Policy Principles* can be found at Attachment 1.

APPEA's submission addresses specific sections of the *Issues Paper*, focussing on those areas that are particularly important for the upstream oil and gas industry.

2. CAPS AND TARGETS REVIEW: COMMENTS ON SPECIFIC SECTIONS OF THE *ISSUES PAPER*

2.1 Section 1.2.1. Australia's emissions reduction goals

A number of reviews have considered the nature of Australia's emission reduction goals, the level at which they should be set and the manner in which they should be achieved. As the *Issues Paper* acknowledges, setting these goals is a more complicated matter than applying a simple formula.

The key consideration is that Australia should make an equitable contribution, in accordance with its differentiated responsibilities and respective capability to global action, to reduce greenhouse gas emissions.

Section 3.6 below considers the appropriate way in which this contribution can be assessed and an appropriate goal be considered.

2.2 Section 2.2.1. Australia's emissions

As a resource rich export focussed economy, Australia has a relatively emissions-intensive resource endowment and comparative advantage that is largely based on our ability to develop this extensive resource base. Combined with Australia's

relatively small and widely dispersed population base, it is little surprise that Australia has a relatively high level of per capita emissions.

Climate change is a global issue. It is the relevant level of absolute concentration of greenhouse gases in the atmosphere that matters to global climate outcomes. Therefore, it is inappropriate for the Authority to focus on per capita emissions levels as a comparator for Australia's emissions level.

The Authority should discontinue any reference to per capita emission levels and instead focus on using a more appropriate measure of Australia's emissions level – absolute emissions levels, emissions as a proportion of GDP or similar.

2.3 Section 2.2.3. Emissions reduction targets

One of the key outputs from this Review will be a consideration of whether Australia should move from its current commitment (of a reduction in its emissions of 5 per cent from 2000 levels by 2020) to a higher level.

The Authority has portrayed (for example, at page 12 of the *Issues Paper*) the 5 per cent reduction target as a 'minimum'. It is, however, more appropriately expressed as the existing agreed target, with movements to other target levels requiring a number of criteria to assessed and met (before consideration of any movement can take place).

The *Issues Paper* at page 13 provides a summary of the conditions against which a movement beyond 5 per cent, or to a 15 per cent or 25 per cent reduction target, will be considered.

APPEA notes that the current state of international commitments, either as set out in the *Issues Paper*, or in the various UNFCCC agreements, does not meet the conditions that have been established for movement beyond a 5 per cent reduction target:

- the level of global commitment remains unclear, with key agreements for international action to 2020 not up for negotiation and agreement until 2015;
- specific targets for advanced economies have not been established;
- verifiable emissions reductions for China, and especially India, are not in place; and
- a robust global agreement is not in place and clarity on access to markets has not been established.

In summary, while Australia should engage with the international community in pursuing identified and beneficial environmental outcomes through reducing greenhouse gas emissions, the conditions for Australia to move beyond the existing agreed 5 per cent reduction target have not been met. The Authority's Review should not recommend a move away from the 5 per cent reduction target.

2.4 Section 3.1.2. Accounting

The *Issues Paper* at page 16 considers how any carry-over of any extra emissions units (arising from a country having a lower emissions level than its Kyoto targets) should be handled.

Any carry-over should be used to expand the cap or banked for use against future emissions targets. It would be against Australia's national interest and against the overarching goal of achieving Australia's emissions reduction targets at least cost for the extra units to be unilaterally cancelled or used as an excuse to increase Australia's emissions reduction target.

2.5 Section 3.2.2. International action

As noted above, Australia should with engage the international community in pursuing identified and beneficial environmental outcomes through greenhouse gas emissions reduction action. However, that the conditions for Australia to move beyond its existing 5 per cent reduction target have not been met.

As noted in Section 3.3 above, the Review should not recommend a move away from the 5 per cent reduction target.

As the *Issues Paper* notes, given the global nature of climate change and economic activity, the international context is important when considering an appropriate 2020 target for Australia. The international context is also relevant to how Australia's economy will change over time, and can affect the competitiveness of Australian industry. This last issue is of particular importance, but is often overlooked in the public debate on international action.

A key area of focus for Australia's upstream oil and gas industry, particularly the export-focused liquefied natural gas (LNG) industry, is the action of Australia's trade competitors. One of the key factors to consider when assessing any changes to Australia's emissions reduction targets is the action or inaction of trade competitors.

The growth in LNG demand has been driven by the economic and industrial transformation of key economies in the Asia-Pacific region. Australia's LNG projects face fierce global competition.

Table 1 below uses data from Annex I of the August 2012 Climate Commission report *The Critical Decade: International action on climate change*[1], which lists the specific actions being taken in a number of *"trading partner and competitor countries"* including the most basic indicator of policy action – whether the country has made a pledge under the Cancun Agreements[2] – and data from the *BP Statistical Review of World Energy, June 2012*[3].

[1] See climatecommission.gov.au/wp-content/uploads/climatecommission_internationalReport_20120821.pdf for further information.
[2] See cancun.unfccc.int/mitigation for further information.
[3] See www.bp.com/sectionbodycopy.do?categoryId=7500&contentId=7068481 for further information.

Table 1 lists the top 20 LNG exporting countries, their total exports – in billions of cubic metres (bcm) and as a percentage of global exports – and whether the country has made a pledge under the Cancun Agreements. Table 1 includes the United States, which could be said to be a potential future competitor, given the export potential of development of its enormous shale gas resources.

Table 1: LNG Exports

Country	LNG exports (bcm)	LNG exports (%)	Cancun Agreement pledge
US	2.0	0.6	Yes
Trinidad & Tobago	18.9	5.7	No
Peru	5.1	1.5	Yes
Belgium	0.6	0.2	Yes
Norway	4.0	1.2	Yes
Spain	0.7	0.2	Yes
Russian Federation	14.4	4.3	Yes
Oman	10.9	3.3	No
Qatar	102.6	31.0	No
United Arab Emirates	8.0	2.4	No
Yemen	8.9	2.7	No
Algeria	17.1	5.2	No
Egypt	8.6	2.6	No
Equatorial Guinea	5.3	1.6	No
Libya	0.1	0.0	No
Nigeria	25.9	7.8	No
Brunei	9.4	2.8	No
Indonesia	29.2	8.8	Yes
Malaysia	33.3	10.1	No
Australia	**25.9**	**7.8**	**Yes**

Source: Climate Commission (2012).

Table 1 shows that of the 20 countries listed, 12 have not made pledges under Cancun Agreements. Those 12 countries accounted over 75 per cent of global LNG exports in 2011. This includes Qatar, one of Australia's major LNG competitors and the world's largest exporter of LNG (with more than 30 per cent of global exports).

Of the remaining eight countries, only Indonesia and Russia (and potentially the United States) could be regarded as directly competing with Australia for LNG market share in the Asia-Pacific. In reality, greenhouse policy initiatives that do apply in practice in Indonesia and Russia are unlikely to have a material impact on their LNG industries.

Future competition (along with that from the US) is likely to come from PNG and East Africa – neither of which could be said to be at the forefront of greenhouse gas reduction policy action.

In summary, the analysis shows that very few of Australia's major LNG competitors are taking on emissions reduction obligations. Indeed, none have policies in place that impose an "effective" carbon price on their LNG exporters. Further, the prospect of our competitors taking meaningful action in the foreseeable future is low.

The upstream oil and gas industry is currently investing around $200 billion in oil and gas projects under construction. These projects will have an enormous positive influence on economic activity in Australia. Separately, they represent some of the biggest projects ever undertaken in Australia; collectively, they account for over 30 per cent of all Australian business investment. The industry also has a further more than $100 billion in investment under consideration.

The continued expansion of Australia's oil and gas industry represents incredible opportunities to all Australians. Australia should be capitalising on these opportunities and maximising growth in living standards and employment by efficiently allocating resources. The economic advancement in our region is overwhelmingly positive for the nation, playing to our comparative advantages as a secure and reliable energy exporter.

The Authority's Review needs to recognise that the situation facing many individual trade-exposed industries differs from broad economy-wide aggregate comparisons:

- It is the competitive position facing individual industries; not just broad action or intention to act at the economy-wide level that counts; and
- The actions of key competitor countries also count; not just the action of so-called "major economies/emitters".

2.6 Section 3.2.4. Economic and social implications

The economic and social implications of any emissions budget, trajectory and targets are key considerations for the Review. The level of economic 'effort' required to meet Australia's commitments and how that level of effort/commitment compares to other countries (comparable effort) is critical. It is difficult to determine, on face value, the level of emissions reduction effort involved in meeting these climate change commitments. Much depends on the particular economic structure of countries and the choice of a historical base year in which to measure future emissions reduction.

A useful means of assessing comparable effort can be made from examining how a country's commitments diverge from its 'no commitment' emissions baseline, adjusting for chosen base years and whether targets are prescribed as a reduction in absolute emissions or the emissions intensity of Gross Domestic Product (GDP).

A report by Deloitte Access Economics (DAE)[4], *The Clean Energy Future: Cancun commitments and comparable effort*, commissioned by the Australian Industry Greenhouse Network (AIGN) and the Business Council of Australia (BCA), and published in December 2011, shows that such a comparison of lower bound abatement pledges shows that Australia shoulders its fair share of emissions reduction. Australia's 5 per cent unconditional commitment implies a 40 per cent reduction in net emissions from a 'no pledge' baseline. This commitment is comparable with key economies such as Japan, the European Union (EU27), North America and China.

[4] See www.aign.net.au/file_download/967/CEF+-+Cancun+and+comparable+effort.pdf for further information. This report stands alongside similar previous studies undertaken by Access Economics for AIGN, *Road to Copenhagen: Negotiating Australia's 'comparable effort'* and *Road to Copenhagen: Economic 'comparable effort' modelling of Australia's national allocation*. Both are available at www.aign.net.au/publications/reports.

Importantly, however, DAE finds the economic impact of Australia's current abatement commitment is far more significant than these other economies, reflecting Australia's generally higher cost domestic abatement opportunities (and therefore higher marginal abatement costs).

Analysis of these impacts indicates that Australia's 5 per cent commitment leads to a loss in Gross National Income (GNI), a comprehensive indicator of economic welfare, of around 2 and 2½ times the global average at 2020 with trading and without trading respectively. Estimated impact on GNI is able to incorporate many different national circumstances of each country, including population, population growth, economic structure, economic growth, resource endowment and abatement opportunities.

Complete analysis of the implications of the existing target for Australia's economic and social conditions shows that most other advanced countries have to significantly increase their pledges if a future international agreement is to reflect a fair distribution of comparable effort from Australia's point of view. It does not support Australia moving away from its existing target.

2.6.1 Australia's emission reduction opportunities

As noted on page 28 of the *Issues Paper*, the emissions reduction opportunities available in Australia and how they change over time will be a key determinant of the economic and social impacts of any given target and trajectory. The relatively high abatement costs for Australia are due in part to the importance of emission and energy-intensive industries to the Australian economy.

Any consideration of Australia's emission reduction opportunities must be broad-ranging and comprehensive and be developed through a comprehensive consultation process with industry.

Previous attempts to consider these issues, such as the ClimateWorks *Industrial Energy Efficiency Data Analysis Project*, suffer from a range of serious shortcomings – from both a methodological and data perspective – which mean (particularly for oil and gas) the analysis is of little use to the Authority for the purposes of this Review.

For example, the analysis concludes the oil and gas industry should invest a total of $1.7 billion on gas compression upgrades, to reduce flaring emissions, much of this having a payback of less than 4 years.

However, to scope, approve and purchase a new gas compressor is a 3 to 4 year project. It can take 12 to 18 months for a compressor to be manufactured and delivered. ClimateWorks have recognised some of the shortcomings in their analysis to date, and the Department of Resources, Energy and Tourism has commissioned WorleyParsons to assess the validity of the data that ClimateWorks have used and improve the "realism" of their estimates.

The Authority should commission its own analytical work to inform its conclusions.

2.6.2 The policy mix

While the Review has stated it will not consider the policy mix designed to achieve Australia's emissions reduction target, the *Issues Paper* does note on page 28 that some policies will reduce emissions more cost-effectively than others.

With this in mind, APPEA refers to its submissions to the Authority's Review of the Renewable Energy Target, and the report prepared by BAEconomics[5], *Implications of the RET for the Australian economy*. The report shows comprehensively that the combination of the Renewable Energy Target with a Carbon Pricing Mechanism (such as that implemented through the *Clean Energy Act 2011)* is not the most cost effective way to meet Australia's emissions reduction target.

Any modelling undertaken by the Authority should compare the costs of meeting an emissions reduction target through a carbon price alone with the costs of meeting the target through the current (and less efficient) policy mix.

2.6.3 International trade in emissions units

The ability to trade permits international offers a mechanism to reduce emissions in a cost effective manner.

Greenhouse gas emissions reduction action should allow for the unrestricted flow of credible emissions units between international jurisdictions.

The restrictions[6] on access to international permits contained in the *Clean Energy Act 2011* may work against this outcome and result in emissions reduction targets being achieved at higher costs. This would be inconsistent with the objective set out on page 29 of the *Issues Paper* of enabling

> … *Australia's targets and caps to be met through a cost-effective mix of domestic and international emissions reductions.*

Any restrictions on the flow of credible emissions units between international jurisdictions be removed.

Any economic modelling commissioned by the Authority should consider the implications for the economy of these restrictions.

2.7 Section 4.1. Relationship with the target, trajectory and carbon budget

A key issue for the Review to consider is the contribution of the sectors not covered by the Carbon Pricing Mechanism to Australia's emissions target (and trajectory and carbon budget).

[5] See www.baeconomics.com.au/wp-content/uploads/2012/09/baeconomics-appea-ret-report-8sep12.pdf for further information.
[6] That the number of eligible international emissions units surrendered for any of the first 5 flexible charge years must not exceed 50 per cent of the person's emissions number for the year and apply an additional quantitative restriction of 12.5 per cent on the use of Certified Emission Reduction Units (CERs), Emission Reduction Units (ERUs) and Removal Units (RMUs) within the overall 50 per cent annual limit.

It is inefficient and inequitable for the economic efforts required to meet emissions reduction targets to be made only by the sectors covered by the Carbon Pricing Mechanism.

Any additional measures targeted at reducing greenhouse gas emissions should only apply to sectors of the economy that are not covered by the Carbon Pricing Mechanism (or a comparable national approach). Measures should be introduced to ensure that the uncovered sectors make an equitable contribution to meeting Australia's emissions reduction targets.

2.8 Section 5.2.2. Future progress

As the *Issues Paper* notes on page 37, the level of future covered and uncovered emissions is uncertain.

It is the case, however, as noted in the recent *Australia's Emissions Projections 2012* report[7], that the growth of Australia's LNG industry will in coming years see its contribution to Australia's emissions profile increase.

However, in considering Australia's emission reduction targets and indeed Australia's contribution to global emissions reduction efforts, it is important to acknowledge the positive contribution Australia's LNG exports make now and will increasingly make to that global effort.

Australia's LNG industry is in a unique position to contribute substantially to the economic development of the nation and reduce global greenhouse gas emissions. Australia's vast reserves and resources of natural gas and proximity to growing markets make us well-placed to meet the global climate change challenge while substantially contributing to Australia's economic growth.

A 2008 study[8] by WorleyParsons, *Greenhouse Gas Emissions Study of Australian LNG*, for example, compares lifecycle greenhouse gas emissions of Australian LNG exports from the North West Shelf Project with Australian east coast black coal exports. The analysis covers the lifecycle: from extraction and processing in Australia through to an end use of combustion (using different power generation technologies) in China for power generation.

The study found that, in the case of LNG produced from the North West Shelf Project:

- For every tonne of greenhouse gas emissions emitted during LNG production within Australia, between 5½ and 9½ tonnes of emissions from the coal alternative can be avoided globally;

[7] See www.climatechange.gov.au/reducing-carbon/reducing-australias-emissions/australias-emissions-projections for further information.
[8] See www.woodside.com.au/our-approach/climate-change/documents/worleyparsons%20(2008)%20greenhouse%20gas%20emissions%20study%20of%20australian%20lng.pdf for further information. For a similar study examining LNG developments using natural coal seam gas as the fuel source compared with Australian east coast black coal developments, see www.appea.com.au.

- LNG has a substantially lower greenhouse footprint associated with it compared to coal – not just in combustion emissions, but throughout its lifecycle; and

- The lifecycle greenhouse intensity for LNG is about 40 per cent lower than that of coal.

Much greater use of Australia's extensive gas resources will be crucial in meeting the challenge of significantly reducing global greenhouse gas emissions at lowest possible cost whilst enhancing Australia's economic and export performance.