



Emissions Reduction Fund: Safeguard Mechanism Consultation Paper March 2015

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KEY POINTS

GENERAL

- APPEA supports a national climate change policy that delivers abatement at least cost.
- Reliable, secure and competitively priced energy is crucial to our everyday lives in Australia. Oil and gas plays a key role in meeting many of our energy needs.
- It is vital that Australia's climate change policy approach, and therefore the design of the Emissions Reduction Fund (ERF) safeguard mechanism, reflects the enormous economic and greenhouse benefit that can flow from a prosperous, vibrant and growing oil and gas industry.
- The major challenge to the industry's continued growth is maintaining Australia's international competitiveness in the face of growing global competition. A high-cost local environment and the emergence of new LNG competitors has increased the level of competition Australia faces as it seeks to win market share and attract investment.
- Australia's national approach to climate change policy is a critical area of policy reform. The ERF and its safeguard mechanism should aim to enhance Australia's international competitiveness as a destination for oil and gas investments. It should not add to the cost burden facing the industry.

GENERAL COMMENTS ON THE CONSULTATION PAPER

- Australia has substantial natural gas resources and developing these resources for domestic use as well as export can provide significant national economic and social benefits.
- The relatively low cost emissions abatement opportunity offered by the increased use of natural gas means that developing these resources can also deliver significant environmental benefits.

SPECIFIC COMMENTS ON THE SAFEGUARD MECHANISM

- The design and operation of a safeguard mechanism is an issue of critical importance to APPEA and its members.
- As the Government has made clear, the mechanism only applies to emissions above 'business as usual' and is not a mechanism to be used to raise revenue to provide funding for the ERF.
- It is vital that the safeguard mechanism not impose costs on Australian industry that are not faced by our international competitors or inhibit industry growth.

Baselines reflecting inherent emissions variability associated with existing natural resources and reserves

- APPEA supports the inclusion in the safeguard mechanism of an approach that allows baselines to be adjusted to reflect inherent emissions variability associated with natural resources and reserves.
- The proposed approach set out in the Consultation Paper is a partial recognition of the various issues with the baseline setting process reflecting the normal operations of the oil and gas industry.
- There are a number of areas where amendment to the proposed approach is required. In particular, the proposed approach:
 - should be amended to allow for facilities to apply to the Clean Energy Regulator to adjust their baseline using the 'independent assessment' approach when it becomes clear that an adjustment will be required, not just a one-off election in 2016-17.



- does not appear to appropriately encompass situations where emissions are steadily growing over time. Such a situation should be dealt with by allowing the baseline adjustment mechanism to reflect this change in emissions profile over time.
- does not appear to appropriately encompass situations where emissions growth is the result of incremental changes in production. A possible solution to effects of incremental changes in production is in the emissions management section. If a facility exceeds its baseline but can show that the emissions intensity is the same or better, then the facility is deemed to be in compliance.

New investments already underway

- APPEA welcomes the acknowledgement in the Consultation Paper of the need to ensure that 'new investments already underway' receive treatment that is consistent with the treatment of existing investments. The proposed approach in the Consultation Paper does, however, fall short of achieving this consistency in number of key areas. In particular:
 - The proposed approach, of using an 'independent assessment approach' to set baselines reflecting expected emissions performance in the year with the highest level of production over the first three years of operation after emissions first exceed 100,000 tonnes CO₂-e, is inadequate and requires amendment.
 - The period provided to establish a baseline for such projects is problematic for LNG projects. The Consultation Paper proposes to fix the baseline for a facility two years after breaching the threshold of 100,000 tonnes CO₂-e per annum. A typical LNG facility is unlikely to have reached its intended design capacity within this period.
 - Furthermore, the treatment of investments already underway appears inconsistent with existing projects, which enjoy a 5-year period of stable operation from which a baseline is derived. For this reason, APPEA proposes that new projects should be allowed a period of 5 years after completion of the ramp-up to set their baseline.

New investments without a final investment decision

- The 'best practice' approach outlined in the Consultation Paper still contains all of the shortcomings that APPEA has highlighted in previous consultation processes associated with the ERF Green Paper and White Paper development. Each of these shortcomings means an alternative approach needs to be developed to apply to these new investments.
- APPEA has recommended an alternative approach during its consultations with the Government and the Department of the Environment to using best practice to set baselines. Should the Government wish to pursue a best practice model, then APPEA would suggest an approach based on 'leading indicators' may be appropriate.
- APPEA would welcome the opportunity to work further with the Government and the Department to develop an appropriate and workable approach to establishing baselines for new investments.
- The nomination of the date 1 July 2020 for a new investment to exceed the safeguard threshold and be considered a new investment already underway versus a new investment that has not received final investment decision (FID) and has not released 100,000 tonnes per year of CO₂-e is arbitrary. APPEA recommends the FID declaration be used to signify a new investment already underway rather than link it to emissions as well.

Establishing baselines for new facilities and significant expansions at best practice

- In addition to the significant shortcomings noted above with the proposed best practice approach, the proposed approach to 'significant expansions' does not encompass situations where emissions growth is the result of incremental changes in production.



Defining significant expansions

- In defining significant expansions, APPEA recommends that rather than the narrow approach proposed in the Consultation Paper, a broader definition be adopted. This could include consideration of several defined factors. For example, the definition should encompass investment that involves capital expenditure to purchase equipment with a useful life greater than five years and materially increases annual BAU emissions.
- In addition, the definition will need to accommodate situations common to the oil and gas industry where significant investment in new plant and equipment is often undertaken in order to maintain a level of production from a facility, but may result in material increases to a facility's greenhouse gas emissions.

Emissions management

- While the 'net emissions' approach, allowing businesses to voluntarily use carbon offsets to net off emissions, is an appropriate feature of the mechanism, the list of credits issued under the ERF must be expanded to include credible international permits/credits as eligible offsets.
- If access to international permits/credits is not included, a range of price control mechanisms should be incorporated into the emissions management process.
- The proposed emissions management approach does not appropriately address situations where emissions growth is the result of incremental increases in production.
 - The ERF White Paper included the option to introduce an "emissions intensity test".
 - Such a test could address the common issue of production facilities that incrementally increase their production as improvement opportunities arise that result in higher absolute emissions.
 - In situations where incremental production increases do not result in emissions intensity of the facility exceeding the inherent emissions intensity of the facility baseline, then the facility should be deemed to be in compliance with the baseline.
- APPEA welcomes the possible approach outlined in the Consultation Paper that would provide for operators with emissions above baselines to apply to the Regulator for a multi-year monitoring period.
- APPEA welcomes the inclusion of a proposed approach that would provide for legislative rules that would allow the Regulator to disregard emissions increases linked to an exceptional event, such as a natural disaster or criminal activity, and exempt the facility from its safeguard obligation for a defined period of time.
- There are a range of other occurrences (such as force majeure events, equipment failure or regulatory requirements) that APPEA recommends also be considered relevant for this exemption.

Publication of information

- The proposed publication of facility level emissions data is inappropriate and should be removed. The proposed publication of facility-level greenhouse gas emissions data runs counter to underpinning approach of the *National Greenhouse and Energy Reporting Scheme Act 2007*, the level at which data has been published since NGERs was established in 2007 and, indeed, one of the bases for industry support for establishment of NGERs itself.

CONCLUSIONS/NEXT STEPS

- APPEA will continue to participate in the further development of the ERF and looks forward to ongoing consultation with the Government and the Department as the safeguard mechanism rules are further developed.



INTRODUCTION

The Australian Petroleum Production & Exploration Association (APPEA) is the peak national body representing the upstream oil and gas exploration and production industry. APPEA has more than 80 full member companies comprising oil and gas explorers and producers active in Australia. APPEA members 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 information about APPEA can be found on our website, at www.appea.com.au.

APPEA has been engaged in the greenhouse policy debate since its inception and has participated in every major consideration of national climate change policy approaches in Australia. APPEA welcomes the opportunity to provide input on the Emissions Reduction Fund (ERF) *Safeguard mechanism Consultation Paper* (the Consultation Paper) as part of its ongoing engagement with the Government on the development of a long-term, sustainable, national climate change policy. This submission follows our submissions on various aspects of the ERF during 2013, 2014 and 2015.

Most importantly, APPEA supports a national climate change policy that delivers abatement at least cost.

APPEA is also a member of the Australian Industry Greenhouse Network (AIGN), a network of industry associations and individual businesses that contribute to the climate change policy debate and see value in joint industry action on climate change policy issues in order to promote sustainable industry development¹. APPEA has contributed to the AIGN submission on the Consultation Paper.

In addition to the APPEA submission, a number of APPEA members have made individual submissions providing comment on the Consultation Paper. This response should be read in conjunction with submissions from individual APPEA members.

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

THE AUSTRALIAN UPSTREAM OIL AND GAS INDUSTRY

The Consultation Paper should be seen within the context of the current state and potential future contribution of the upstream oil and gas industry to the Australian economy and to the welfare of all Australians. Reliable, secure and competitively priced energy is crucial to our everyday lives in Australia. Within this framework, oil and gas plays a key role in meeting many of our energy needs.

¹ See www.aign.net.au for further information.



Australia has vast resources. Geoscience Australia² recently estimated that Australia's total gas resources are currently around 819 trillion cubic feet (tcf) or 900,500 petajoules (PJ).

By way of comparison, Australia's production of natural gas in 2013-14 (including exports) was around 2 tcf or 2,200PJ, meaning Australia has more than enough gas to service both domestic and export markets for decades.

Our abundant natural gas resources, in particular, place Australia in an enviable position to maintain long-term, cleaner energy security domestically and internationally. Natural gas makes it possible for Australia to meet the world's growing energy needs over the coming decades while incorporating a strategy to curb emissions and address the risks posed by climate change.

Just as importantly, the industry creates significant wealth for the country, including through the employment of many Australians, underpinning the revenue collections of governments and generating valuable export revenue for the Australian economy. Almost \$200 billion is currently being invested in oil and gas projects including seven major liquefied natural gas (LNG) export projects that will add to the three LNG projects under operation³.

Australia's oil and gas industry has underpinned much of Australia's economic prosperity and growth since at least the early 1960s. A recent PwC report, *Value Adding: Australian Oil and Gas Industry*⁴, shows that:

- The oil and gas industry's production profile directly represents around 2 per cent of current GDP, with value-added of approximately \$32 billion in 2012-13.
- At current projected investment levels, the total forward contribution of the combined oil and gas and exploration sectors is projected to double to approximately \$53 billion in 2019-20 and \$67 billion in 2029-30.
- Driving strong value-add from the industry is an increase in gas exports over the next decade. The value of natural gas exports (already Australia's third largest export, after iron ore and coal) is expected to reach around \$60-70 billion by the middle of 2019 and production is expected to double over the next five years.
- In 2030, when production (on the basis of current and forthcoming capacity) and prices are expected to stabilise, the oil and gas industry's total economic contribution is projected to be around 2.6 per cent of the Australian economy.
- After accounting for its inter-linkages with the rest of the economy (companies all over Australia are supply goods and services to the oil and gas industry, and the use of fly-in, fly-out staffing is spreading the benefits of the industry) the sector is projected to be around 3.5 per cent of national output.

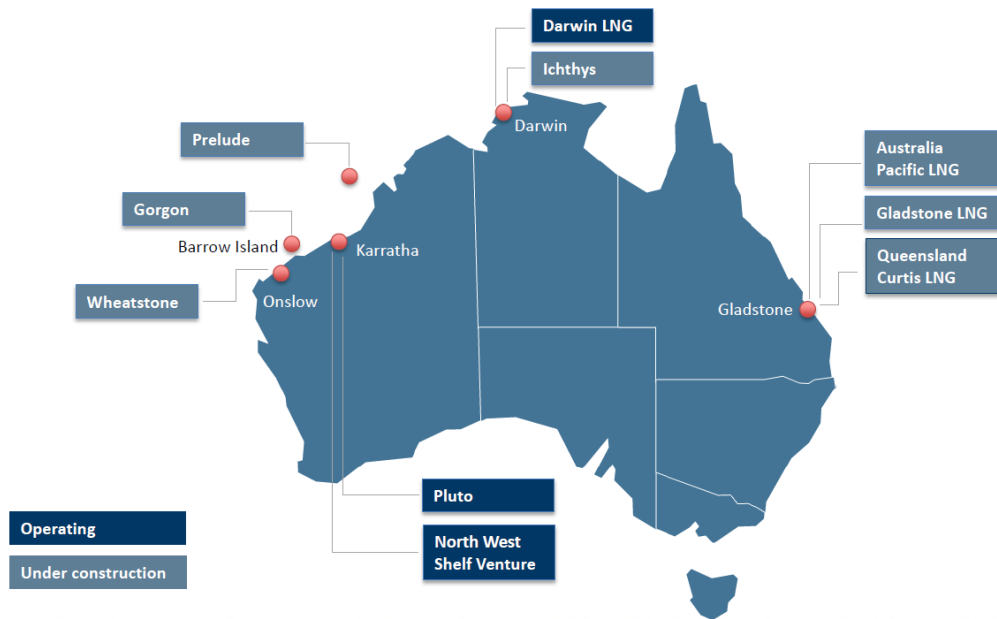
² Geoscience Australia, Department of Industry and Bureau of Resources and Energy Economics (2014), *Australian Energy Resource Assessment: Second Edition*, page 97 (available at www.ga.gov.au/metadata-gateway/metadata/record/gcat_fa6d674d-ecbb-6629-e044-00144fdd4fa6/Australian+Energy+Resource+Assessment+-+Second+Edition).

³ See Department of Industry (Office of the Chief Economist) (2014), *Resources and Energy Major Projects*, for a listing of upstream oil and gas projects at the Publicly Announced Stage, Feasibility Stage, Committed Stage and Completed Stage (available at www.industry.gov.au/industry/Office-of-the-Chief-Economist/Publications/Pages/Resources-and-energy-major-projects.aspx).

⁴ PwC (2014), *Value-adding: Australian Oil and Gas Industry*, pages 28-29 (available at www.appea.com.au/wp-content/uploads/2014/11/PwC-Report-Oil-and-Gas-Industry-Sept-2014-FINAL.pdf).



Figure 1: Australian LNG projects: by liquefaction status



Source: Department of Industry (2014).

By 2020, the sector’s economic contribution to the national economy will more than double to \$65 billion and taxation paid will rise from \$8.8 billion in 2012 (\$4.9 billion in corporate taxes and \$3.8 billion in production taxes) to reach almost \$13 billion.

This means that the stakes are high in realising the industry’s potential benefits. It is vital that Australia’s national climate change policy approach, and the central role the ERF safeguard mechanism will play in that approach, recognises the enormous economic and (as is considered below) greenhouse benefit that can flow from a prosperous and vibrant upstream oil and gas industry.

THE KEY ROLE NATURAL GAS PLAYS IN REDUCING GLOBAL GREENHOUSE GAS EMISSIONS

Greater use of Australian natural gas – in the domestic market, and in Asia as LNG exports – can significantly reduce greenhouse gas emissions.

THE IMPORTANCE OF NATURAL GAS AS A LOW GREENHOUSE GAS EMISSIONS ENERGY SOURCE IN AUSTRALIA

Australia could generate significant additional national economic, environmental and social benefits through greater utilisation of its substantial natural gas resources.

Using more natural gas in Australia’s power generation and resource processing would significantly enhance the nation’s ability to meet increasing energy needs while at the same time reducing greenhouse gas emissions.

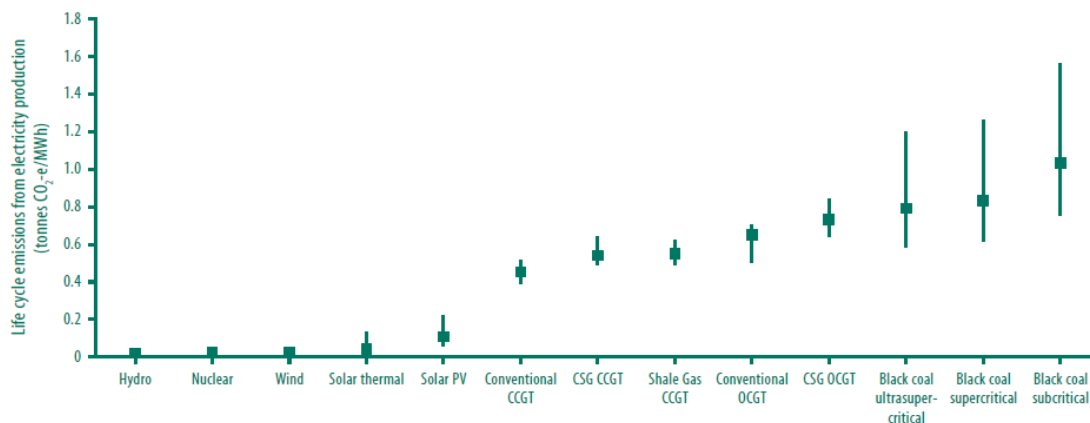
These outcomes are possible because currently available natural gas technologies produce only 30 to 50 per cent of the emissions produced by current coal technologies in generating electricity.



According to the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Australian Council of Learned Academies (and a range of energy industry analysts), current generation coal-fired power stations produce between 0.8 and 1.2 tonnes of carbon dioxide equivalent greenhouse gas emissions (CO₂-e) per megawatt hour (MWh) of generation while a combined cycle gas turbine power station produces only around 0.35 to 0.36 tonnes CO₂-e/MWh⁵.

This is illustrated in Figure 2, which shows the significantly lower greenhouse gas emission associated with the gas-fired electrical power generation compared to the use of other conventional fuels.

Figure 2: Emissions intensity of various fuel types for electricity generation (tonnes CO₂-e/MWh)



Source: ACOLA (2013).

Natural gas provides the one of the lowest cost means by which Australia could reduce greenhouse gas emissions in the electrical power generation sector, both through increased use of existing gas-fired power stations and a 'coal-to-gas shift' (that is, new gas-fired power stations). Natural gas can provide an important complement for intermittent renewable energy sources.

The increased use of natural gas also has several additional environmental benefits, such as:

- Reduced emissions of particulates.
- Reduced emissions of sulphur dioxide (an important contributor to smog and acid rain).
- Significantly lower demand for water for power station cooling.

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.

⁵ Australian Council of Learned Academies (2013), *Engineering Energy: Unconventional Gas Production, a study of shale gas in Australia Final Report*, 4 June (available at www.acola.org.au/index.php/projects/securing-australia-s-future/project-6).



THE IMPORTANCE OF NATURAL GAS AS A LOW GREENHOUSE GAS EMISSIONS ENERGY SOURCE IN ASIA

In considering Australia's contribution to global emissions reduction efforts, and the role the ERF safeguard mechanism can play in supporting (or hindering) that contribution, 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 greenhouse gas emissions.

Australia's vast 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.

While the demand for energy as part of the industrialisation of key Asian economies is a key driver, the cleaner properties of natural gas as a lower emitting and cleaner burning fuel is also driving much of the foreign demand for LNG.

Action on climate change is entirely consistent with strong demand for LNG. This reality should be recognised in the design of the safeguard mechanism.

A 2008 study by WorleyParsons⁶, for example, compares lifecycle greenhouse gas emissions of Australian LNG exports from the North West Shelf Project with Australian east coast black coal exports in terms of lifecycle greenhouse gas emissions: from extraction and processing in Australia through to an end use of combustion (using different power generation technologies) in China for power generation.

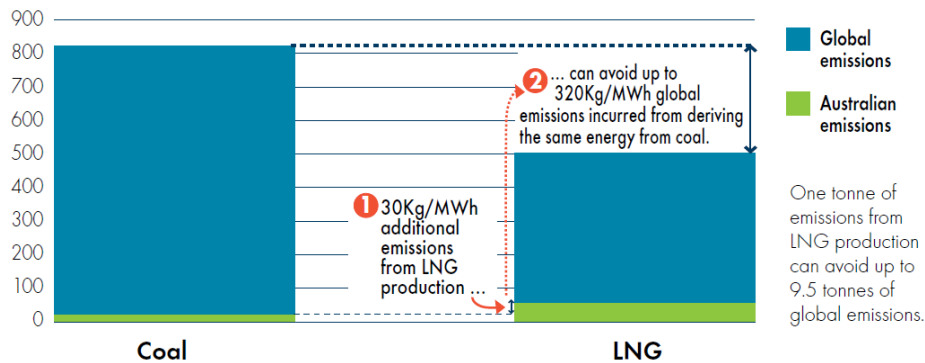
Figure 3 below is derived from data within the study, and shows that:

- For every tonne of CO₂-e emitted in LNG production within Australia, between 5.5 and 9.5 tonnes of emissions from the coal alternative can be avoided globally.
- LNG has a substantially lower greenhouse footprint associated with it compared to coal – not just in combustion emissions, but throughout its lifecycle.
- The lifecycle greenhouse intensity for LNG is about 50 per cent lower than that of coal.

⁶ WorleyParsons (2008; 2011), *Greenhouse Gas Emissions Study of Australian LNG*, originally prepared August 2008; updated for public release, March 2011 (available at www.woodside.com.au/Our-Approach/Climate-Change/Pages/Benefits-of-LNG.aspx).



Figure 3: Displacement of coal by LNG (kg/MWh CO₂-e by fuel source)



Source: Derived from data in WorleyParsons (2008; 2011).

A similar 2011 WorleyParsons study⁷ compared lifecycle greenhouse gas emissions of Australian LNG projects from Queensland using natural gas from coal seams as the fuel source with Australian east coast black coal exports. The analysis considered lifecycle greenhouse gas emissions: from extraction and processing in Australia through to an end use of combustion (using different power generation technologies) in China for power generation. It found that, in the case of Queensland LNG exports:

- For every tonne of CO₂-e emitted in LNG production within Australia, between 2.5 and 4.3 tonnes of emissions from the coal alternative can be avoided globally.
- Considering savings from a 30 year 10 million tonnes per year (Mtpa) Queensland onshore gas LNG project, if this gas is combusted in a combined cycle gas turbine (CCGT) plant instead of a subcritical coal plant, the life cycle emissions are 42.7 Mt CO₂-e per year, the annual savings 37.2 Mt CO₂-e and the project life savings 1,114 Mt CO₂-e⁸. For combustion in a CCGT plant instead of a supercritical coal plant the annual savings and project life savings are 21.7 Mt CO₂-e and 652 Mt CO₂-e respectively.
- The lifecycle greenhouse intensity for LNG is about 40 per cent lower than that of coal.

There are significant benefits to Australia and internationally from the greater use of gas as a lower greenhouse gas emitting energy source.

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.

The Government should in the design of the safeguard mechanism, recognise the global role LNG can play in global greenhouse emissions reductions.

⁷ WorleyParsons (2011), *Greenhouse Gas Emissions Study of Australian CSG to LNG*, April.

⁸ This compares to total Australian annual emissions (over the year ended September 2014) of 546.7 Mt CO₂-e (see www.environment.gov.au/climate-change/greenhouse-gas-measurement/publications#quarterly).



SYNTHESIS REPORT OF THE FIFTH ASSESSMENT REPORT (AR5) BY THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC): HIGHLIGHTING THE ROLE OF NATURAL GAS

The key role natural gas can play in reducing global emissions was highlighted in the Synthesis Report of the Fifth Assessment Report (AR5 Synthesis Report), released by the Intergovernmental Panel on Climate Change (IPCC) in November 2014⁹.

In considering the role of natural gas, the AR5 Synthesis Report found (on page SYR-51):

*GHG emissions from energy supply can be reduced significantly by replacing current world average coal-fired power plants with modern, **highly efficient natural gas combined-cycle power plants** or combined heat and power plants ... {WGIII SPM.4.2} [EMPHASIS ADDED]*

INTERNATIONAL COMPETITIVENESS: THE MAJOR CHALLENGE

The major challenge to the industry's continued growth is maintaining Australia's international competitiveness in the face of growing global competition. A high-cost local environment and the emergence of new LNG competitors in East Africa, North America and other locations may increase the level of competition Australia faces, as it seeks to win market share and attract investment.

The industry and our governments must do everything possible to ensure the \$200 billion in projects that remain under construction, commence production in a timely and cost-effective manner and that Australia secures future oil and gas investment to supply to domestic and international needs.

Some factors affecting current and future investment, such as movements in the Australia dollar or the global oil price, are beyond the ability of the Australian industry to influence. However, other key challenges must be addressed.

There are also critical policy areas that require genuine reform. Australia's national approach to climate change policy is one of those critical areas. The development of the safeguard mechanism should be aimed at enhancing Australia's international competitiveness as a destination for oil and gas investments. It should not add to the cost burden facing the industry.

GENERAL COMMENTS ON THE SAFEGUARD MECHANISM CONSULTATION PAPER

Australia has substantial natural gas resources and developing these resources for domestic use as well as export can provide significant national economic and social benefits. The relatively low-cost emissions abatement opportunity offered by the increased use of natural gas means that developing these resources can also deliver significant environmental benefits.

In order to realise these benefits, APPEA will continue working with the Australian Government through the development of the safeguard mechanism (and associated aspects of the ERF) to:

⁹ See www.ipcc.ch/report/ar5/index.shtml and www.ipcc.ch/report/ar5/syr/ for further information.



- Support a long-term sustainable national climate change policy response. Oil and gas projects are generally long-term – often 30-40 years or more. Policy stability (including in Australia's climate change policy response) is therefore very important.
- Support market conditions that allow the efficient use of natural gas for electrical power generation and in direct applications in the domestic economy, for example in resource processing. This will lower the emissions intensity of Australia's electricity supply sector and have a consequent reduction in the emissions intensity of resource processing.
- Increase the export of Australian LNG to help Australia's Asian trading partners lower their greenhouse gas emissions, thereby contributing to a potential significant reduction in global emissions.

If the ERF is to form the sustainable basis of Australia's national response, the safeguard mechanism must be designed and implemented in a way that enhances Australia's international competitiveness and does not impose costs on Australian industry, including the oil and gas industry, that are not faced by our competitors.

SPECIFIC COMMENTS ON THE CONSULTATION PAPER

The design and operation of a safeguard mechanism is the most important aspect of the ERF for the oil and gas industry and an issue of critical importance to APPEA and its members.

With that in mind, APPEA offers the following comments on those aspects of the Consultation Paper of most interest/relevance to the Australian upstream oil and gas industry.

ESTABLISHING BASELINES

Baselines reflecting inherent emissions variability associated with existing natural resources and reserves (pages 8-9)

APPEA supports the inclusion in the safeguard mechanism of an approach that allows baselines to be adjusted to reflect inherent emissions variability associated with natural resources and reserves.

The proposed approach set out on page 9 is a partial recognition of the various issues with the baseline setting process reflecting the normal operations of the oil and gas industry. However, there are a number of areas where amendment to the proposed approach is required to ensure it more comprehensively reflects the situations that face the industry. In particular:

- The proposed approach should be amended to allow for facilities to apply to the Clean Energy Regulator (the Regulator) to adjust their baseline using the 'independent assessment' approach when it becomes clear to the facility an adjustment will be required, not just a one-off election in 2016-17. If the approach is appropriate in the first year of operation of the mechanism, there is no reason applications should not be made at a future time. For many oil and gas projects there will be emissions variability associated with the natural resources, anticipated prior to the establishment of projects, but that does not occur until several years afterward. APPEA recommends the restriction that means applications can be made only in the first year of the operation of the safeguard mechanism be removed. APPEA also recommends facilities be allowed to project forward more than three years (noting the comments below) or over the life of the project.
 - For example, several member projects include one or more additional resources (that is, a separate reservoir/s) that must be accessed during the life of the project to maintain LNG production at design levels. Development of these reservoirs is fully



incorporated in final investment decisions (FID), as well as in LNG supply agreements with overseas customers. Such reservoir development meets the criteria for a natural resource related baseline adjustment proposed in the Consultation Paper, but will only be required some years after the respective projects have started. In some cases significant increases emissions will occur due to this subsequent reservoir development (for example, higher levels of CO₂ in the reservoir). If no baseline adjustment is provided for such developments, then business as usual project emissions would in future significantly exceed the baseline.

- These outcomes are clearly not in line with the ERF policy intent. To reiterate, APPEA recommends that the baseline adjustment should be available at any time during a natural resource project if the criteria outlined in the Consultation Paper are met.
- Baseline applications under the independent assessment approach (as noted on page 11 and again on page 12) *“... could also be required to include a statement outlining how the operator intends to manage greenhouse gas emissions and energy use at the facility”*. Consistent with the Australian Government’s overarching policy approach to deregulation and reducing regulatory burden, APPEA recommends this statement refer to existing documents (such as environmental impact statements) and not impose new compliance requirements on facilities.
- The proposed approach does not appear to appropriately encompass situations where emissions are steadily growing over time (due the inherent properties of the resource, for example, as greater impurities are found in the gas field towards the end of the field life). Such a situation should be dealt with by allowing the baseline adjustment mechanism to reflect this change in emissions profile over time.
- Similarly, the proposed approach does not appear to appropriately encompass situations where emissions growth is the result of incremental changes in production (a common feature of oil and gas facilities). A possible solution to effects of incremental changes in production is in the emissions management section. If a facility exceeds its baseline but can show that the emissions intensity is the same or better, then the facility is deemed to be in compliance. APPEA recommends, as is considered further below, the previously proposed emissions intensity test be re-introduced in the emissions management section.
- The wording in final dot point on page 9 requires amendment to more appropriately reflect the properties of the natural resource or reserve that are relevant to the oil and gas industry. To accommodate both the oil and gas and hard rock mining industries, APPEA recommends more ‘generic’ wording be used, as follows: *“... facility emissions are expected to exceed their historical baseline and the change in natural resource ~~grade or depth~~ is properties are the primary reason for this.”*
- Further, application to amend a facility’s baseline should retain the flexibility to be inclusive of one or more triggers such as production/capacity growth, change in the natural resource characteristics/properties or change in government policy or product specifications.

Vertically integrated production processes (page 6 and page 7)

The requirement to disaggregate vertically integrated production processes (VIPPs) as set out on page 6 and page 7 of the Consultation Paper does not appear to be achieving a specific policy outcome and it is unclear how this will result in a more effective safeguard mechanism. It will however, create an administrative burden, especially considering that the personnel who completed the 2009-10 inventory are not, in many cases, in the role anymore.

APPEA recommends that this administrative burden be removed from the policy, by allowing existing VIPPs that have been reporting their emissions in compliance with the current Act, to continue reporting as VIPPs into the future.



NEW INVESTMENTS

Given, as noted above, the industry is currently part way through investing \$200 billion in new projects (in addition to \$30 billion or so in investments that have commenced operation in recent years and so would also be considered 'new investments already underway') in some of the largest projects ever undertaken in Australia, the treatment of these investments is of vital importance to the industry.

New investments already underway (pages 10-12)

APPEA welcomes the acknowledgement in the Consultation Paper of the need to ensure that 'new investments already underway' receive treatment that is consistent with the treatment of existing investments. The proposed approach on pages 10-12 does, however, fall short of achieving this consistency in number of key areas.

APPEA has below recommended a number of important amendments that are required to ensure this consistency is achieved and this aspect of the safeguard mechanism does not impose inappropriate costs on oil and gas facilities.

In particular:

- The proposed approach, outlined of page 11, of using an 'independent assessment approach' to set baselines reflecting expected emissions performance in the year with the highest level of production over the first three years of operation after emissions first exceed 100,000 tonnes CO₂-e, is inadequate and requires amendment.
 - The period provided to establish a baseline for such projects is problematic for LNG projects. The Consultation Paper proposes to fix the baseline for a facility two years after breaching the threshold of 100,000 tonnes CO₂-e per annum. A typical LNG facility is unlikely to have reached its intended design capacity within this period. LNG projects comprise of highly complex upstream and downstream facilities that require a significantly longer period of commissioning, start-up and ramp-up before steady-state production levels are achieved. The scale of commissioning and start-up for typical LNG facilities also means that the 100,000 tonnes CO₂-e per annum threshold would be breached well ahead of actual production commencing.
 - Furthermore, the treatment of investments already underway appears inconsistent with existing projects, which enjoy a 5 year period of stable operation from which a baseline is derived. For this reason, APPEA proposes that new projects should be allowed a period of 5 years after completion of the ramp-up¹⁰ to set their baseline. The independent assessment approach outlined in the Consultation Paper could be applied to this 5-year period.

¹⁰ Criteria for defining the ramp-up period could be: ramp-up commences when the whole facility or new investment commissioning is completed and the first commercial transaction of the intended product is made. Note that this is different from commissioning the individual parts of an existing facility; and ramp-up ends when the average production of the facility or new investment over a single NGER reporting year has reached its intended design capacity.



- The proposal on page 12 to set a default baseline of 100,000 tonnes CO₂-e where a facility does not successfully apply for a baseline should not be included in the safeguard mechanism rules.
- The Consultation Paper provides little detail on how the proposed audit approach would work. APPEA recommends the following process:
 - The independent assessment is completed which includes forecast emissions over the life of the project.
 - An audit is commissioned. The audit process should check calculations and not assumptions. This reflects usual practice where auditors are used to audit historical events where recorded data has occurred. The Regulator may have a role to review assumptions. This approach could be as part of the NGERs audit after three years. The auditors would be the same qualified/approved auditors per NGERs, and this would just form part of the audit scope for the third year of operation.
 - This would set the baseline for the project.

New investments without a final investment decision (pages 12-14)

The 'best practice' approach outlined on pages 13-14 of the Consultation Paper still contains all of the shortcomings that APPEA has highlighted in previous consultation processes associated with the ERF Green Paper and White Paper development. Each of these shortcomings means an alternative approach needs to be developed to apply to these new investments.

In summary, the use of 'best practice' tests as a means for determining an emissions baseline for new facilities and significant expansions has proven to be complex and subjective to operationalise for complex projects where applied in other programs.

The use of 'lagging' indicators such as emissions intensity or the 'best' industry performers may represent an appropriate proxy for best practice where the facilities in an industry are homogenous and where business inputs are consistent. Where facilities in an industry are highly bespoke due to the nature of the facility inputs, environmental factors or other project attributes, the resulting emissions intensities can vary widely.

In such cases, applying a best practice test based on emissions intensity or equipment selection becomes highly subjective and requires extensive normalisation of factors. A regime that requires a regulator to apply such a test assumes the Regulator is better placed than the project proponent to assess how best to accommodate the project attributes in the design of the facility.

Experience in obtaining environmental approvals where best practice tests have been attempted shows such assessments generally require significant time and resources by the proponent and Regulator and can often delay investment decisions as proponents seek to have the resulting baseline determined prior to a FID.

There exist powerful and pervasive motivating factors, such as increasing energy costs, to ensure facilities in the upstream oil and gas industry are built to be as efficient as practicable in the context of the unique attributes of each project.

Rather than using a heavily normalised emissions intensity, emissions baselines for new facilities and major expansions should be determined from actual facility emissions data, once the facility has been fully commissioned and is operating under steady state conditions.

Given this, the concept of a lagging indicator best practice test by reference to the 10 per cent of industry participants with the lowest emissions intensity should not be considered further.



APPEA has recommended an alternative approach during its consultations with the Government and the Department of the Environment (the Department) to using best practice to set baselines. Should the Government wish to pursue a best practice model, then APPEA would suggest an approach based on 'leading indicators' may be appropriate.

Such leading indicators may involve:

- The project proponent's Project Design Process requires realistic alternatives to be considered and evaluated including options to reduce emissions.
- The cost of future greenhouse gas emissions regulation, both implicit and explicit, has been considered in the facility design.
- An energy efficiency assessment at key design phase gates has been undertaken to identify opportunities for improved energy use.

Defining best practice by reference to the 10 per cent of industry participants with the lowest emissions intensity does not reflect the many factors that drive emissions in complex projects. To the extent such a test is appropriate, it is only appropriate where all facilities in an industry utilise a common and consistent input, where simple processing steps are involved and where outputs are common in quality and type across all facilities. This situation does not apply in the upstream oil and gas industry where each facility is unique in its design in response to the attributes of each project.

APPEA would welcome the opportunity to work further with the Government and the Department to develop an appropriate and workable approach to establishing baselines for new investments.

The nomination of the date 1 July 2020 for a new investment to exceed the safeguard threshold and be considered a new investment already underway versus a new investment that has not received FID and has not released 100,000 tonnes per year of CO₂-e is arbitrary.

APPEA recommends the FID declaration be used to signify a new investment already underway rather than link it to emissions as well. As noted in the Consultation Paper on page 10, after a facility has received FID there is limited scope to change the facility design and hence the emissions performance.

Establishing baselines for new facilities and significant expansions at best practice (pages 14-15)

In addition to the significant shortcomings noted above with the proposed best practice approach, the proposed approach to 'significant expansions' does not encompass situations where, as outlined above, emissions growth is the result of incremental changes in production (a common feature of oil and gas facilities).

A possible solution to effects of incremental changes in production is in the emissions management section. If a facility exceeds its baseline but can show that the emissions intensity is the same or better, then the facility is deemed to be in compliance. APPEA recommends, as is considered further below, the previously proposed emissions intensity test be re-introduced in the emissions management section.

Defining significant expansions (page 15)

In defining significant expansions, APPEA recommends that rather than the narrow approach proposed on page 15 of the Consultation Paper, a broader definition be adopted. This could



include consideration of several defined factors. For example, the definition should encompass investment that:

- Involves capital expenditure to purchase equipment with a useful life greater than five years.
- Materially¹¹ increases annual BAU emissions.

In addition, the definition will need to accommodate situations common to the oil and gas industry where significant investment in new plant and equipment is often undertaken in order to maintain a level of production from a facility. For example, this investment may take the form of developing additional hydrocarbon reservoirs, adding pumping or compression facilities, or additional waste water treatment and disposal. Each of these may result in material increases to a facility's greenhouse gas emissions.

EMISSIONS MANAGEMENT

As the Government has made clear, the mechanism only applies to emissions above business as usual and is not a mechanism to be used to raise revenue to provide funding for the ERF.

It is vital that the safeguard mechanism not impose costs on Australian industry that are not faced by our international competitors.

With that in mind, APPEA offers the following recommendations to improve the operation of this aspect of the safeguard mechanism.

While the 'net emissions' approach, allowing businesses to voluntarily use carbon offsets to net off emissions, is an appropriate feature of the mechanism, the list of credits issued under the ERF (currently Australian Carbon Credit Units (ACCUs)) must be expanded to include credible international permits/credits as eligible offsets under the safeguard mechanism (that is, in the list provided at section 22XM of the Act).

Restricting eligible offsets to only ACCUs inappropriately increases the costs facing facilities that net off their emissions and, in a situation where the shallow Australian market is required to provide offsets for a number of facilities in the same compliance period, risks driving the ACCU to inappropriately and inefficiently (recognising climate change is a global problem and not restricted to Australia) high prices for ACCUs.

If access to international permits/credits is not a feature of the scheme, a range of price control mechanisms (particularly the inclusion of a price cap that limits ACCU prices to levels consistent with the prevailing international price) should be incorporated into the emissions management process.

The purpose of these ACCUs should be to provide, as the Consultation Paper notes on page 16, workable options for facilities to manage their emissions, not to establish a 'captive market' for the small number of Australian-based carbon offset providers.

¹¹ Noting the definition of 'materially' would need to be agreed.



In addition, the rules should provide sufficient time to acquire ACCUs to avoid a situation where compliance deadlines associated with the emissions management process drive spikes in the ACCU price.

The proposed emissions management approach does not appropriately address situations where emissions growth is the result of incremental increases in production (a common feature of oil and gas facilities). The ERF White Paper included the option to introduce an “emissions intensity test”. Such a test could address the common issue of production facilities that incrementally increase their production as improvement (that is, “debottlenecking”) opportunities arise that result in higher absolute emissions. In situations where incremental production increases do not result in emissions intensity of the facility exceeding the inherent emissions intensity of the facility baseline, then the facility should be deemed to be in compliance with the baseline. Optimisation of production assets is sound practice and should not be penalised by incurring additional costs through the safeguard mechanism.

While APPEA notes the arguments presented on page 18 of the Consultation Paper against the previously proposed emissions intensity test, APPEA recommends it be reinstated as a feature of the emissions management process. The concerns raised in the Consultation Paper regarding administrative complexity can be addressed by clear and appropriate definition of “emissions intensity”, and in particular the product stream used for the normalisation of absolute emissions.

This issue is also considered in the AIGN submission and APPEA would refer you to the AIGN recommendations.

Addressing natural variability of emissions (pages 16-19)

APPEA welcomes the possible approach outlined on page 19 of the Consultation Paper that would provide for operators with emissions above baselines to apply to the Regulator for a multi-year monitoring period of up to three years.

Exemptions for exceptional circumstances (page 20)

APPEA welcomes the inclusion of a proposed approach that would provide for legislative rules that would allow the Regulator to disregard emissions increases linked to an exceptional event, such as a natural disaster or criminal activity, and exempt the facility from its safeguard obligation for a defined period of time.

APPEA assumes the inclusion of references to a natural disaster or criminal activity are to provide relevant, but not exhaustive, examples of activities for which an exemption would be appropriate.

As has been discussed previously, there are a range of other occurrences (such as force majeure events, equipment failure or regulatory requirements) that APPEA recommends also be considered relevant for this exemption. They would include:



Exceptional circumstance	Examples of supporting documentation that could be provided
Force majeure	<ul style="list-style-type: none">• Description of nature, location and duration of event and impact on emissions.• Note schedule to resume normal operations.
Regulatory requirements	<ul style="list-style-type: none">• Provide reference to nature of the regulatory requirements.• Provide schedule of activity, quantum of emissions, and source of emissions.
Equipment failure	<ul style="list-style-type: none">• Description of nature, location and duration of event and impact on emissions.• Note schedule to resume normal operations
Other	<ul style="list-style-type: none">• Provide description of event and impact on emissions.• Provide schedule of activity, quantum of emissions, and source of emissions.

ADMINISTRATION

Publication of information

The proposed publication of facility level emissions data is inappropriate and should be removed.

The proposed publication of facility-level greenhouse gas emissions data runs counter to underpinning approach of the *National Greenhouse and Energy Reporting Scheme Act 2007*, the level at which data has been published since NGERs was established in 2007 and, indeed, one of the bases for industry support for establishment of NGERs itself.

In addition to a range concerns around release of potentially commercially sensitive information that could place facilities at a competitive disadvantage, the Government has agreed through various consultation processes dating back to 2007, that publication of data at a facility level (as opposed to reporting to the Regulator) serves no public policy purpose and can indeed provide misleading information about the operations at particular facilities.

In introducing to the Australian Parliament in August 2007 the *National Greenhouse and Energy Reporting Bill 2007*, the Explanatory Memorandum¹² stated on page 27:

It is proposed that company-level data be made publicly available online by the national reporting system.

In evidence to the Senate Standing Committee on Environment, Communications, Information Technology and the Arts as part of its *Inquiry into the National Greenhouse and Energy Reporting Bill 2007*¹³, the Department explained the rationale for providing that public disclosure should be at a company level on pages 27-28 of the Committee's September 2007 report, as follows:

¹² See www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bld=r2857 for a copy of the Explanatory Memorandum.

¹³ See www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Completed%20inquiries/2004-07/greenhouse/index for a copy of the Committee report.



Concerning public right to know at a facility level, public right to know generally applies to emissions that might be of the nature that would have a potential local impact on people's health or amenity, and greenhouse gas emissions are a global impact rather than a localised impact.

The Department went on to note on page 28 that a major issue with disclosure at the facility level

... is the commercial-in-confidence nature of that. It can go directly to the efficiency of production and their competitiveness with other facilities.

APPEA recommends no change to the current approach, that is, facility level emissions data be reported to the Regulator but that only higher level data (as has been the case since 2007) be published.

COVERAGE

APPEA supports the approach, set out in page 3 of the Consultation Paper, that the Joint Petroleum Development Area (JPDA) and Greater Sunrise gas fields will not be covered by the safeguard mechanism (section 6A of the Act).

CONCLUSIONS/NEXT STEPS

Our abundant natural gas resources place Australia in an enviable position to maintain long-term, cleaner energy security domestically and internationally. Natural gas makes it possible for Australia to meet the world's growing energy needs over the coming decades while incorporating a strategy to curb emissions and address the risk of climate change.

APPEA will continue to participate in the further development of the ERF and looks forward to ongoing consultation with the Government and the Department as the safeguard mechanism rules are further developed.