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The Secretary
House of Representatives Standing Committee on Economics
PO Box 6021
Parliament House
Canberra ACT 2600

Dear Committee Secretary

Committee Inquiry into Impediments to Business Investment in Australia

The Australian Petroleum Production & Exploration Association (APPEA) is the peak national body representing companies engaged in oil and gas exploration and production in Australia. APPEA has 61 Full Member companies (accounting for about 95 per cent of Australia's petroleum production) and more than 130 Associate Members companies supplying goods and services to the industry. APPEA works with governments to promote the efficient and safe development of the nation's oil and gas resources.

APPEA welcomes the opportunity to make a submission to the Committee's inquiry into impediments to business investment in Australia.

Key factors impacting/impeding oil and gas investment in Australia have been broadly classified under the following categories:

- Taxation and fiscal policy – a stable, transparent and long-term taxation and fiscal framework is necessary to underpin long term investments.
- Access to resources – poorly designed or unscientific restrictions on access to petroleum resources are a direct impediment to new and incremental investment.
- Climate Change and Energy policies – as the working life of projects is measured in decades, climate and energy policies should be clear, stable and long-term to give investors a degree of policy certainty.
- Exploration – an efficient and competitive regulatory regime addressing lengthy approval timeframes, and the provision of pre-competitive data is crucial.
- Environmental regulation – inefficient, costly and duplicative approvals processes and regulations are a significant impediment to the industry's growth.

Background

The oil and gas industry is an integral part of the Australian economy, including through:

- the supply of reliable and competitively priced energy.
- the investment of hundreds of billions of dollars of capital and operating expenditure.
- the payment of billions of dollars in taxes and resource charges to governments.

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- the direct employment of tens of thousands of Australians.
- the generation of significant sums of export earnings (and the replacement of costly imports).

Australia has a phenomenal economic opportunity to supply a major share of the energy demand for the rapidly growing Asia Pacific region. The International Energy Agency (IEA) in its *World Energy Outlook 2017* (WEO) estimated that there are 1.1 billion people without electricity and another 2.8 billion that do not have access to clean cooking facilities.¹ As the standards of living for those living in our region improve, their demand for energy, particularly cleaner energy, will grow.

A key challenge in achieving future growth is maintaining Australia's international competitiveness in an ever-changing global energy market. A high-cost local environment, a complex domestic regulatory framework and the potential for other countries to attract market opportunities will continue to make it challenging for Australia to capture the next wave of global investment in the industry. Nonetheless, significant opportunities still exist and the potential rewards for Australia are immense.

The Fraser Institute's *Global Petroleum Survey 2017*, released in November 2017, ranked 97 jurisdictions on 'barriers to investment' to oil and gas exploration and production. The survey results indicate investors are avoiding some Australian jurisdictions, leaving local businesses and families exposed to higher prices and uncertain energy supply.²

The survey ranked New South Wales (85th), Northern Territory (86th) and Victoria (87th) out of 97. Jurisdictions that have banned or restricted onshore gas development in Australia have the dubious distinction of joining Venezuela, Libya and Iraq in the 15-least attractive oil and gas investment destinations in the world. With bans on conventional and unconventional onshore gas exploration, Victoria has fallen from being Australia's most attractive jurisdiction in 2011 to the least attractive in 2017.

With this background in mind, APPEA seeks to ensure that government policy settings:

- allow transparent, open and secure access to resources for exploration and development;
- support investment and industry productivity through a stable and competitive taxation regime that recognises the cost of doing business; and
- facilitate access to domestic and international markets on globally competitive terms.

The Australian upstream oil and gas industry

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. Gas-fired electricity generation is a cost-effective technology which combines reliability and rapid ramp-up times to complement intermittent renewable energy technologies.

Gas is a key fuel for many industrial processes and an essential feedstock for producing items such as fertilisers, cleaners, polymers and refrigerants.³

¹ IEA, [World Energy Outlook 2017](#), November 2017, p. 107, Paris.

² Fraser Institute, [Global Petroleum Survey 2017](#), November 2017.

³ See www.appea.com.au/oil-gas-explained/benefits/gas-and-manufacturing.



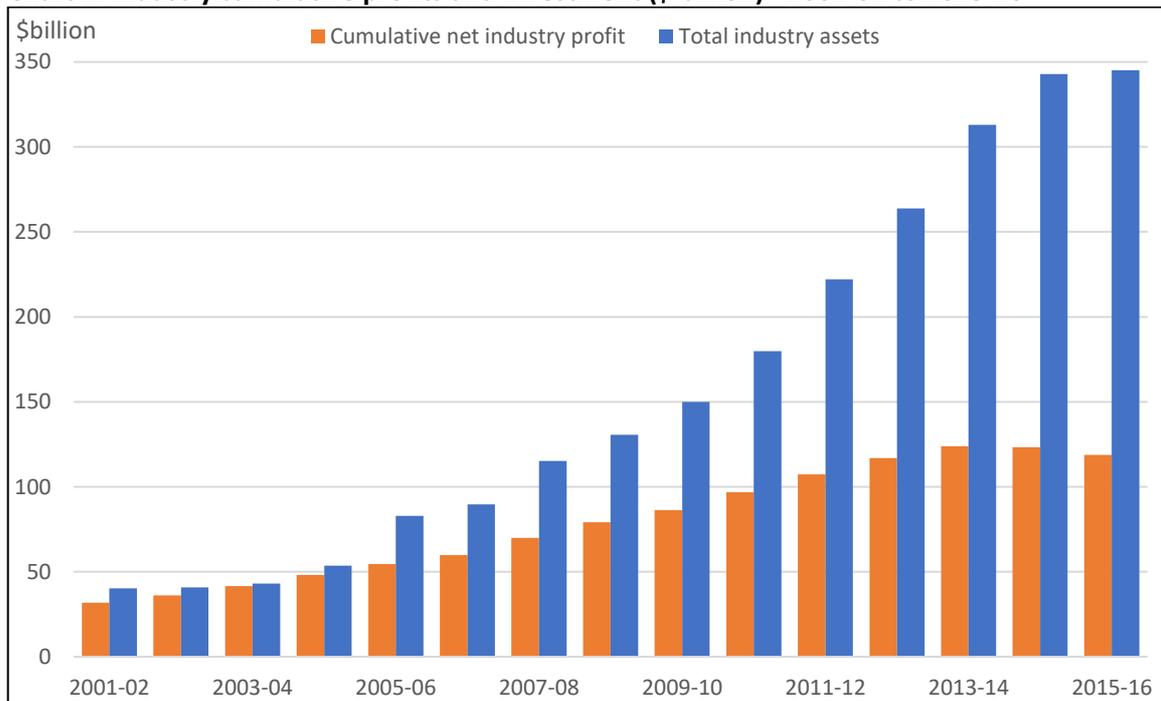
The Australian oil and gas industry directly employs 32,200 people - almost triple the employment from a decade ago.⁴

Liquefied natural gas (LNG) is Australia’s third largest commodity export after iron ore and coal. According to the Department of Industry, Innovation and Science (DIIS), LNG exports are forecast to total \$30 billion in 2017-18, an increase of 36 per cent compared with a year ago and more than three times higher when compared to a decade ago.⁵

In Australia, oil and gas are the largest and third largest fuel sources for energy consumption respectively, together accounting for 62 per cent of all energy consumption in 2015-16 (oil – 37 per cent, gas – 25 per cent).⁶

The Australian oil and gas industry has invested more than \$300 billion in the economy over the last decade alone. Since APPEA’s annual Financial Survey commenced in the mid 1980’s, investment (as measured by the value of capital assets) has been almost three times greater than the industry’s net profit over the period.

Chart 1: Industry cumulative profits and investment (\$ billion) - 2001-02 to 2015-16



Source: APPEA Financial Survey

As of October 2017, the Australian oil and gas industry had over \$230 billion worth of potential projects on the books, including Barossa-Caldita, Browse, Narrabri and Scarborough projects.⁷

⁴ Australian Bureau of Statistics, catalogue number 6291.0.55.003 - [Labour Force, Australia, Detailed, Quarterly](#), Feb 2018, table 06, released on 29 March 2018.

⁵ Department of Industry, Innovation and Science, [Resources and Energy Quarterly, March 2018](#), Canberra, April 2018.

⁶ Department of the Environment and Energy, [Australian Energy Update 2017](#), September 2017, Table F.

⁷ Department of Industry, Innovation and Science, [Major Projects data](#), December 2017.



	2016		2017	
	Number of projects	\$ billion	Number of projects	\$ billion
Publicly announced	4	15.5+	8	26.8+
Feasibility stage	10	42.6+	14	99.4+
Committed	11	169.0	12	107.2+
Completed	3	23.8	7	65.1

Source: Department of Industry, Innovation and Science (Office of the Chief Economist)

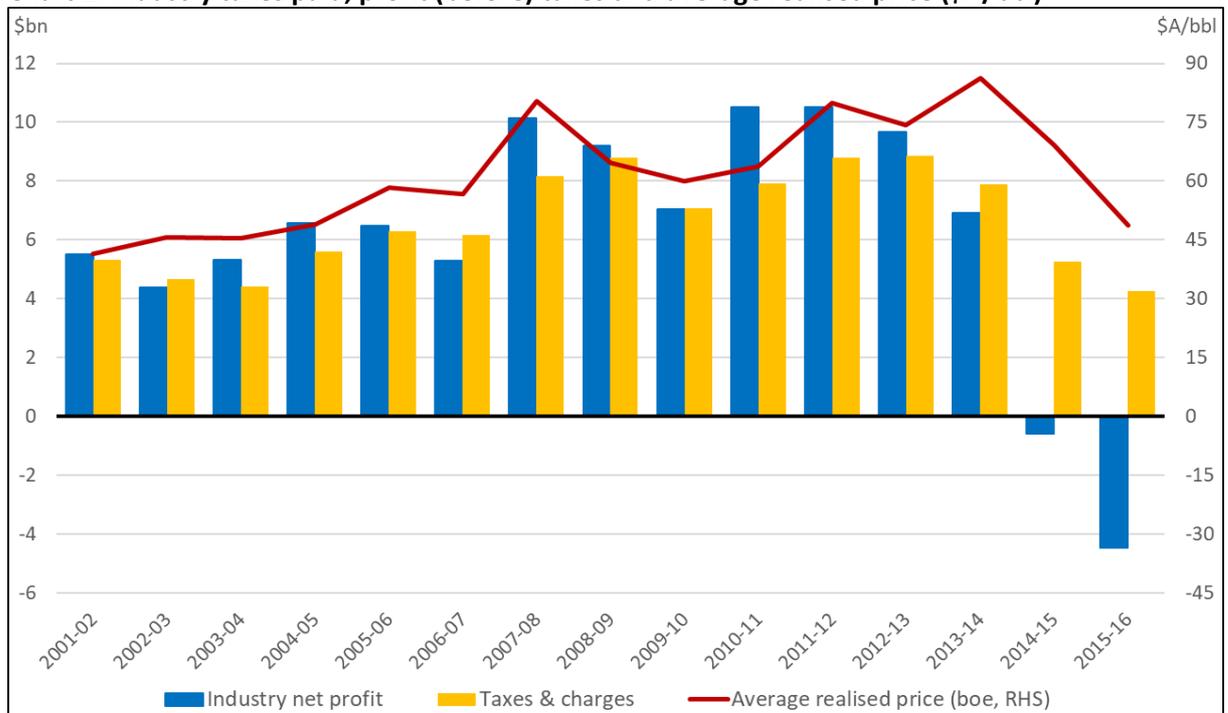
However, future investment is not certain. The challenging market, increasingly complex and often uncoordinated regulatory requirements and fiscal uncertainty mean it is more important than ever to ensure the policy and regulatory framework remains competitive and encourages exploration and development.

In the context of this inquiry, there are many factors affecting the investment decisions in the Australian oil and gas industry. The inquiry is timely and has an important role in identifying impediments and recommending reforms to ensure potential future investments are secured.

Taxation and Fiscal Policy

The fiscal framework is a key factor shaping investment decisions in the industry. Companies are confronted with an array of taxes, charges and fees covering petroleum exploration and production. Fiscal imposts include resource taxes (including the petroleum resource rent tax, petroleum royalties and production excise), company (income) tax and a wide variety of other taxes, fees and charges.

Chart 2: Industry taxes paid, profit (before) taxes and average realised price (\$A/bbl)



Source: APPEA Financial Survey



Since commercial production commenced in Bass Strait in the 1960's, the industry has contributed an estimated \$250 billion – in today's dollars – to governments through resources charges and company tax payments. Data compiled by APPEA indicates that, in the last two years, while the industry has recorded consecutive losses, significant taxation has continued to be paid. Total payments to governments averaged around \$7.3 billion per year over the last decade. The amount paid in 2015-16 was lower due to low oil prices and high levels of expenditure.⁸ The continued payment of taxes at a time when the industry has been under severe pressure refutes suggestions that the industry has not been paying its way.

A competitive taxation regime is essential if Australia is to continue to attract investment. Further investment in existing and future oil and gas projects is needed to underpin secure and reliable energy supplies. In addition, Australia's oil and gas exploration is at a 20-year low. Industry and governments need to work together to turn this around – see further comments in relation to exploration below.

Petroleum Resource Rent Tax

The Commonwealth's petroleum resource rent tax (PRRT) has been operating successfully since its introduction in the 1980s. It remains a global benchmark for a profits-based resources tax regime and has provided a stable framework that has underpinned large scale investments in the industry over many years. The PRRT has also been instrumental in promoting a long-term and robust exploration effort in Australia to find and develop our oil and gas resources. It remains a perfect fit for oil and gas operations in Australia.

PRRT was carefully designed to be sensitive to factors such as price, cost and production. This means it can deliver a fair return to the nation while also encouraging industry investment – a combination which grows the tax take over time. It is important to understand that PRRT is a profit-based tax so revenue will reflect the profitability of each project. Some projects may need many years before they become profitable.

Project Case Study – The Barossa Project (*Project operator: ConocoPhillips*)

ConocoPhillips and its co-venturers are proposing to develop discovered hydrocarbon resources located offshore about 300 kilometres north of Darwin. The Barossa Area Development Project is an offshore gas and light condensate project that would provide a new source of gas to the existing Darwin LNG (DLNG) facility. Progressing Barossa would represent a further investment in Australia of multi-billions of dollars and would extend the life of the DLNG facility for over 20 years. This would support over 1,300 existing jobs across WA and the NT and deliver significant tax revenues to the governments.

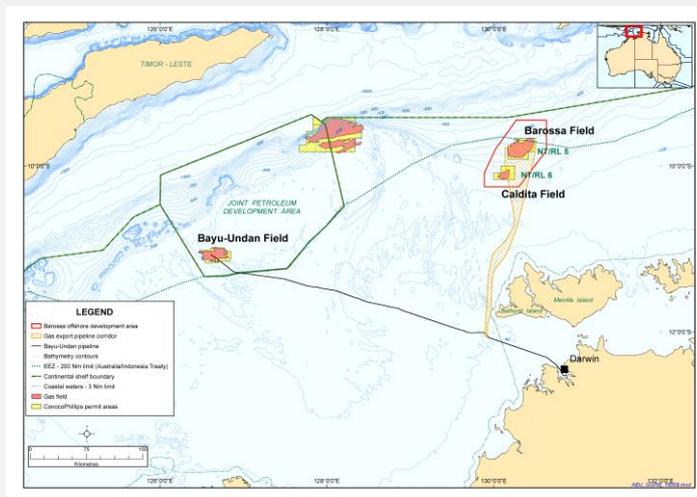
In April 2018, the project entered the front-end engineering and design (FEED) phase of development (a precursor to a final investment decision) which will continue for approximately 18 months. During the FEED phase, the costs and technical definition for the Project will be finalised, gas and condensate sales agreements progressed and access arrangements negotiated with the owners of the DLNG facility and Bayu-Darwin Pipeline.

The project participants consider the project is a leading candidate to backfill the Darwin LNG facility from 2023 when the existing offshore gas supply from Bayu-Undan is expected to be exhausted. The continued operation of the DLNG facility past the expected life of the Bayu-Undan fields will provide significant benefits to both investors and the Australian community.

⁸ [APPEA Financial Survey 2015-16](#).

The project participants have needed to apply rigorous cost disciplines, together with the cost benefits of using existing infrastructure, to enable the project to be cost competitive. To date, nearly \$1 billion has been expended on the project – the commitment to enter FEED has required the commitment of several hundred million dollars more.

As a marginal project in an industry where competition for capital is intense, stable government policies and regulatory settings are critical if the project is to be successful. Investment impediments such as adverse changes to PRRT or company tax could add billions of dollars in costs and render Barossa uneconomic as a Darwin LNG backfill option. Similarly, interventions requiring gas to be allocated to specific markets will create further uncertainty for the customers who will need to sign long-term gas supply contracts to underwrite the project. These project risks are potentially compounded by ongoing uncertainty over climate change and energy policies.



Overall, PRRT has been critical to Australia’s success in becoming a global leader in the supply of gas to domestic and worldwide markets. An independent review of PRRT that commenced in late 2016 led by Mr Michael Callaghan AM PSM (with assistance from Treasury and Australian Taxation Office officials) examined the operation of the tax and whether it remains fit for purpose. In the report’s findings, the following was noted:

“Relatively low PRRT revenue does not necessarily mean that the Australian community is not receiving an equitable return from the use of its resources. The other objective of the PRRT is not to discourage investment. The fact that PRRT revenue varies in line with the profitability of a project may be an important factor in not discouraging investment in the Australian petroleum industry. In addition to PRRT revenue, the Australian community gains from the jobs created during the construction and operation of these projects and the range of other tax payments they generate, particularly company income tax. (p.11)

From an industry wide perspective, it is essential that the basic design features of the regime are maintained to provide investors with the necessary certainty to underpin future investments. It is recommended that the Committee notes the success and bipartisan support that has existed for PRRT and endorses its continued use as the primary resource taxation mechanism for Australia.



Company (Income) Tax

Prospectivity and the share of production or profits taken by governments are often cited by investors as being two of the most important factors affecting oil and gas investment location choices around the world. The company tax system is central in influencing investment decisions in the Australian oil and gas industry and our ability to compete for international investment funds.

A long-standing feature of the Australian tax system has been the ability of companies to immediately deduct the cost of exploration for company tax purposes. This is a deliberate design feature of the company tax regime that recognises the very high-risk nature of exploration. Any change to the present provisions (either real or perceived) will negatively impact on future levels of exploration undertaken in Australia at a time when the level of exploration is already at two decade lows.

The treatment of capital costs largely accounts for the differing impact of company tax across the business community. A large percentage of the costs incurred in non-capital intensive industries (for example, the banking, finance, retail or services-related sectors) are generally immediately deductible for company tax purposes, while those incurred in capital intensive industries (such as within the gas and infrastructure sectors) are generally deductible over longer periods of time. As a result, there is a bias inherent in the company tax system. For capital intensive industries, the delayed recovery of deductible costs imposes an additional cost on investment.

Comparisons undertaken over many years show that most of our overseas competitors allow project investors to depreciate capital for company tax purposes over periods considerably less than ten years. Australia's statutory write-off period for oil and gas capital assets is 15 to 20 years.

The negative impacts associated with the use of long write-off periods for plant and equipment are exacerbated by the significant time lags that can occur from when expenditures are incurred and when a tax deduction can be first claimed. While the general principle of 'installed ready for use' decides when tax depreciation can start on plant and equipment, the value of plant can start to diminish well before the commencement of first production. For example, in the case of large gas projects, capital expenditures can be incurred more than five years before production commences.

Moreover, the very high safety requirements, exacting operational standards and strict contractual obligations in terms of maintaining a continuity of energy supply makes it essential for the engineering life of equipment to considerably exceed its operational life. In this context, while equipment may have theoretical design or engineering life of a certain number of years, it will generally be constructed with an operational life considerably less than its design life. As such, the physical life of an asset (the general basis of depreciation) will not necessarily be a reliable guide as to the economic life of equipment.

Case Study: Optimising the Development of Discovered Resources – Asset Realignments

A government policy setting that would help support investment and industry productivity is roll-over relief for swaps involving both upstream and downstream project assets (that is, asset realignments). A number of APPEA members have already suggested that deferring the tax payable on such asset realignments would remove a barrier to making efficient use of resources and existing infrastructure. It



would allow projects that might not have reached a Final Investment Decision on a stand-alone basis to be aggregated into more economic prospects, for example by allowing an interest in an upstream permit to be swapped for an interest in downstream processing infrastructure.

The existing realignment rules in the tax legislation are a positive first step, but these were narrowly targeted at upstream permit realignments. They do not facilitate the more complex commercial arrangements and collaborations being considered by industry to optimise the development of what may be otherwise stranded resources. APPEA understands that the Board of Taxation has already submitted its recommendations to the Treasurer on roll-over relief for asset swaps involving both upstream and downstream project assets.

Recently enacted tax reforms in other jurisdictions will give fresh impetus for new investment in those jurisdictions. In APPEA's view, this underlines the need for further progress on this policy setting. There is little risk to the tax base providing targeted integrity measures are implemented.

From a tax perspective, it is also important to recognise that Australia has needed to source very large sums of capital to fund exploration and development programs over the last two decades. Domestic capital markets are relatively small and often are reluctant to invest in some petroleum activities. As such, it is important that the tax regime remains responsive of the need to source capital from a variety of sources (both domestic and overseas). Arbitrary restrictions on the ability to claim debt as a deduction has the real potential to act as an impediment to future investment.

Access to Resources

Poorly designed or unscientific restrictions on access to petroleum resources are a direct impediment to business investment in Australia. The Council of Australian Governments' (COAG) Energy Council has endorsed the need to bring both more gas supply and suppliers into the market; regrettably this objective has not been supported by all governments in Australia.

The *Blueprint for the future: Independent Review into the Future Security of the National Electricity Market* report by the panel led by Australia's Chief Scientist Dr Alan Finkel AO, commissioned by COAG (Finkel Review Final Report), also recommended that governments should avoid blanket restrictions and bans on gas projects and instead encourage the safe exploration and development of the industry by adopting evidence based regulatory regimes to manage risk on a case-by-case basis.

In his speech to the EUAA 2018 National Conference, Rod Sims, the chairman of the Australian Competition and Consumer Commission (ACCC) said:

*"... moratoria and other regulatory restrictions in Victoria, NSW and Tasmania are impeding the market response by not allowing onshore exploration and development of potential onshore gas resources."*⁹

The ACCC has repeatedly highlighted the simple fact that more supply means lower prices and increased energy security. The ACCC also highlights that prices in the southern states are unnecessarily higher because of the need to buy interstate gas to meet demand. Transporting gas from Queensland can add \$2-\$4 a gigajoule to gas prices for customers in southern states.

⁹ Rod Sims, ACCC, [C&I users need affordable energy](#), EUAA 2018 National Conference, 3 May 2018.



It is noteworthy that the Independent Scientific Panel Inquiry in Western Australia is Australia's 12th inquiry or review into hydraulic fracturing in recent years – it is the second such inquiry in Western Australia in the last five years. This series of inquiries is despite all inquiries confirming that, with appropriate regulation and good industry practice, hydraulic fracturing is safe. Fear campaigns around hydraulic fracturing have led some states to strangle development.

The most extreme case is Victoria, which has prohibited all onshore gas activity. Victoria once had a conventional onshore gas industry. Today, exploration is considered unacceptable.

The recently completed Northern Territory Hydraulic Fracturing review, chaired by the Honourable Justice Rachel Pepper, has led to the NT Government lifting the near two-year moratorium that stalled onshore gas exploration and development in the Territory. This will enable the creation of thousands of jobs, generate over time billions of dollars of government revenue and delivery of much-needed energy supplies for the NT and the nation. The Government accepted the key finding of the inquiry that risks associated with onshore gas development and hydraulic fracturing can be managed by effective regulation.

Australia's Chief Scientist Dr Alan Finkel AO has stated in relation to hydraulic fracturing that *"... (t)he evidence is not there that it's dangerous. In fact, the evidence is that, if properly regulated, it's completely safe."* (ABC Lateline, 27 January 2015).

The ongoing ACCC Inquiry continues to underline a simple fact – the only sustainable way to place downward pressure on gas prices and to improve energy security is more gas supply and more gas suppliers. This should be the focus of all governments.

The consequences of *not* supporting gas development are deeply concerning:

- Higher energy costs – electricity and gas – for industries and households;
- Higher emissions from the generation sector, assuming that gas would otherwise have replaced coal-fired plants;
- A loss of competitiveness for industries that need gas as a feedstock and for energy;
- Lost opportunities for regional development;
- Diminished revenue for governments;
- Lost export dollars; and
- A shrinking local supply chain with fewer jobs.

These challenges are most pronounced in the jurisdictions with bans and regulatory restrictions in place. They are the jurisdictions most exposed to supply risks and higher prices.

Victoria has no onshore gas production. It relies on production from offshore basins in Commonwealth waters – basins where production is expected to decline in coming years.¹⁰ NSW has virtually no local gas supply – more than 95 per cent of its gas comes from interstate – and its last producing asset will close in 2023. Yet Victoria has banned all onshore gas development – a moratorium on conventional activities is in place until 30 June 2020 and there is a permanent ban on unconventional operations.

Maintaining a ban on onshore gas restricts supply and drives prices up. Victoria has the opportunity to safely develop onshore gas, which will be needed more and more, to complement

¹⁰ Rod Sims, ACCC, [C&I users need affordable energy](#), EUAA 2018 National Conference, 3 May 2018.



offshore supply. Effectively playing short-term politics with energy supply guarantees long-term and avoidable economic pain.

The NSW government seems to be in no hurry to release new acreage or to approve the only 'live' project in the State.

Climate Change and Energy Policy

Gas has an essential role to play in reducing emissions. Used in power generation, natural gas is a cleaner burning fuel, with lower emissions compared to the National Electricity Market (NEM) average. Gas-fired generators can be rapidly started making them complementary with intermittent renewable energy. Exporting gas as LNG helps our Asian trading partners to reduce the emissions within their economies.¹¹

These outcomes are possible because, as data on page 203 of the Finkel Review Final Report shows, available natural gas power generation technologies can reduce greenhouse gas emissions by 55 per cent compared to the NEM average, and by 68 per cent compared to current brown coal generation technologies and 61 per cent compared to current black coal generation technologies.¹²

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

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

APPEA is committed to working with governments as they develop policy responses to climate change. APPEA in February 2016 released a second edition of its *Climate Change Policy Principles*¹³ – setting out the principles that APPEA considers should underpin Australia's policy response to climate change.

Key aspects of the federal government's climate change and energy policy approach applying to the Australian oil and gas industry are the Australian Domestic Gas Security Mechanism (ADGSM) and the Emissions Reduction Fund Safeguard Mechanism (the safeguard mechanism).¹⁴

Historically, stable, transparent and reliable policy settings have been a major competitive advantage for Australia. However, this advantage has been eroded over the last decade.

¹¹ See *Gas Vision 2050* for more information. *Gas Vision 2050* was developed by Australia's peak gas industry bodies and demonstrates how gas can continue to provide Australians with reliable and affordable energy in a low-carbon energy future. See www.appea.com.au/media_release/gas-vision-2050/ and www.appea.com.au/wp-content/uploads/2017/03/GasVision2050_March2017.pdf for more information

¹² COAG, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future, Commonwealth of Australia 2017*, June 2017, p. 203.

¹³ A copy of APPEA's *Climate Change Policy Principles* can be found at www.appea.com.au/2016/02/appea-updates-climate-change-policy-principles.

¹⁴ Further information on the safeguard mechanism, administered by the Clean Energy Regulator, can be found at www.cleanenergyregulator.gov.au/ERF/About-the-Emissions-Reduction-Fund/the-safeguard-mechanism.



Energy Policy

In June 2017, the federal government announced the ADGSM which would restrict LNG exports in the event of a forecast shortfall in domestic gas supply. While this mechanism was designed to secure domestic gas supply, it risks exacerbating tight market conditions by deterring new investment and ‘crowding out’ new entrants to the east coast gas market. The ADGSM creates unprecedented sovereign risk Australia.

For years, APPEA had been warning governments that the political and regulatory barriers to developing new gas supplies must be addressed urgently. The main obstacle to developing more supply has been the opposition of some State governments. Governments must address the real problem – a lack of supply created by high regulatory costs and political barriers. With exploration at a 20-year low, the pipeline for future supply is precarious. The only way to ensure long-term energy security and to put downward pressure on prices is to remove restrictions and make it possible for explorers to find new gasfields and producers to develop these resources.

Australia’s upstream gas industry is committed to working with the Federal Government to ensure sufficient gas is available to meet demand in the domestic market.

Climate Change Policy

APPEA supports a national climate change policy that reduces greenhouse gas emissions at least cost and facilitates investment decisions consistent with an international price on carbon.

For the Australian oil and gas industry to successfully invest in Australia it is essential that the government get the design and operation of the safeguard mechanism right. As APPEA noted in its submission¹⁵ to the Australian Government’s 2017 Review of Australia’s Climate Change Policies, the mechanism should minimise costs on Australian producers that inhibit industry growth or are not faced by our competitors.

In particular, the following are key factors that can see the safeguard mechanism operate successfully while maintaining industry competitiveness:

- *The treatment of trade-exposed industries, such as Australia’s LNG exports:* to ensure their international competitiveness is maintained, and Australia can become a more attractive destination for oil and gas investment.
- The existing provisions to accommodate *natural resource variability* in the oil and gas sectors should be expanded and maintained as an enduring feature of the safeguard mechanism. These mechanisms recognise the particular circumstances facing the oil and gas industry and the range of factors, such as geology, that influence emissions from projects, but over which the proponents have little or no control.
- *Access to international carbon markets:* APPEA has long advocated the use of credible international permits/credits in order to meet any obligation under Australian laws to manage greenhouse gas emissions.

¹⁵ APPEA’s submission is available at www.environment.gov.au/submissions/climate-change/review-climate-change-policies-2017/australian-petroleum-production-and-exploration-association-appea-ltd.pdf.



- *A reconsideration of the proposed 'best practice' approach to Safeguard Mechanism baseline setting for investments commencing after 1 July 2020: to ensure such an approach does not pose a significant impediment to future investment in the upstream oil and gas industry.*

Natural gas has a key and ongoing role to play as Australia and the world makes the transition to a cleaner energy future. It is crucial that Australia's climate change policies recognise this vital role and secures Australia's competitiveness as an investment destination.

The second part of energy policy that affects the industry as large energy users is the electricity market rules and regulations. As the Energy Security Board set up by the COAG Energy Council has pointed out:

"Fifteen years of climate policy instability has complicated long-term investment decisions in the NEM and has compromised system security and reliability. This has left our energy system vulnerable to escalating prices while being both less reliable and secure."¹⁶

Any policy or regulatory intervention implemented to address the challenges needs to be designed in a manner that ensures balance between the objectives of ensuring affordability, reliability while leading to lower emissions. APPEA supports market-based policies which deliver least cost abatement, without putting at risk Australia's trade-exposed industries.

To that effect, APPEA has supported the proposed National Energy Guarantee (NEG) as a promising approach to the perennial policy challenge of cutting emissions from electricity generation without crudely picking winners or jeopardising reliability. The Guarantee will impose new obligations on electricity retailers to deliver dispatchable power while reducing the emissions intensity of their generation mix. It will be vital that there is certainty about these obligations and the regulatory arrangements do not inhibit the entry of new retailers.

Intermittent renewable energy requires "on call" electricity generation to manage falls in renewable output or spikes in demand. Gas-fired generation is a key technology capable of delivering that flexible response since it can ramp up and down quickly. On-call gas-fired electricity generation will continue to back up intermittent renewable generation into the foreseeable future. Renewable projects will also have a new incentive to create firm dispatchable power. This will provide new opportunities for natural gas and renewables to partner in providing affordable, reliable and low-emissions energy to Australian consumers and industry.

As the Finkel Review Final Report noted:

"Access to a reliable and affordable gas supply is in the interest of all Australians for its direct use for heating, as a feedstock chemical for industrial processes and as a fuel for electricity generation. In the NEM, gas-fired generation can provide a reliable, low emissions substitute for ageing coal-fired generation, and can provide essential security services to complement variable renewable electricity (VRE) generation."¹⁷

Experience from the US has shown how quickly emissions from the generation sector can be cut by fuel switching. A report by the US Energy Information Administration (EIA) confirms the

¹⁶ Energy Security Board, [National Energy Guarantee: High Level Design Document](#), 20 April 2018, p. 12.

¹⁷ [Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future](#), Commonwealth of Australia 2017, p. 205



growing switch from coal to gas-fired electricity was the biggest contributor to a 1 per cent fall in US energy-related emissions in 2017 as compared with 2016. The US has reduced energy-related carbon emissions 14 per cent since 2005, and the EIA has once again affirmed that these reductions are “mainly” attributable to increased natural gas use for electricity generation. This was possible because the US developed its abundant unconventional gas resources. It is an irritating fact for activists but the US shale gas revolution has delivered a huge environmental as well as economic dividend.¹⁸

We have a similar opportunity in Australia. There are more than sufficient resources to underpin a historic shift to a lower emissions generation sector. In Western Australia and the Northern Territory, gas already fuels most electricity generation.

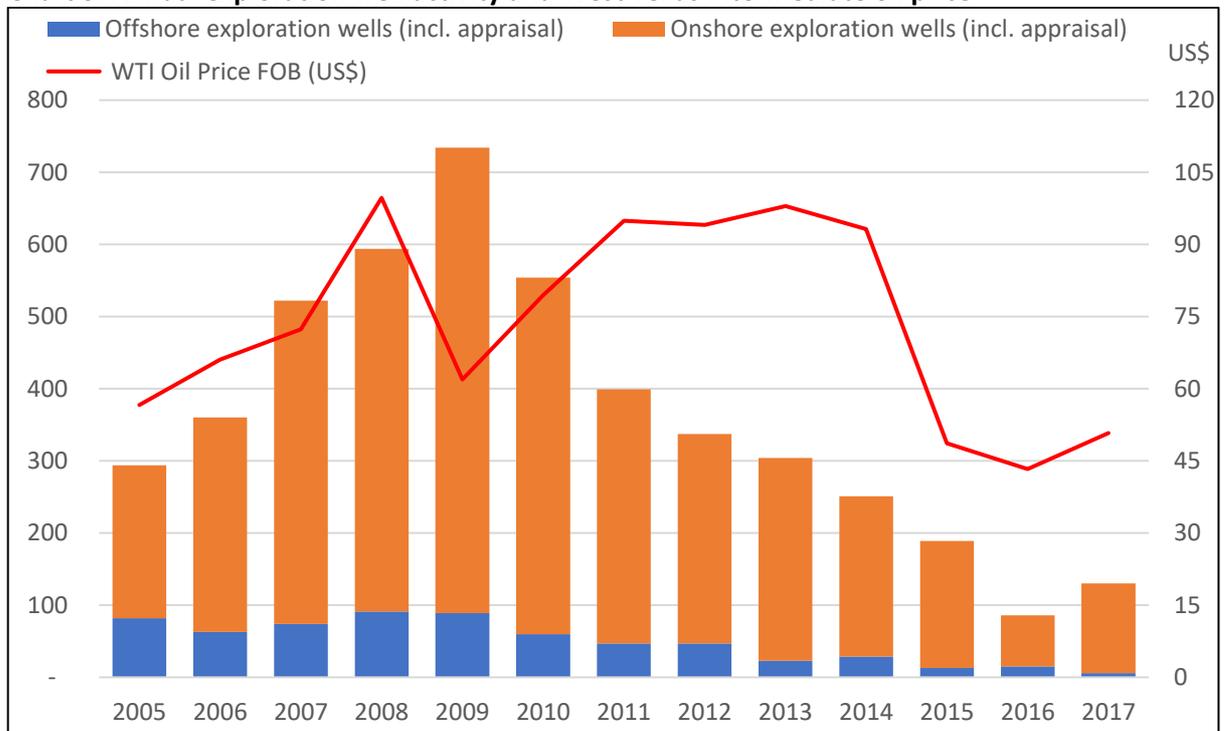
Exploration

Petroleum exploration provides information on the existence, likely size, and distribution of oil and gas resources. Petroleum exploration is critical in identifying and confirming the existence of new commercial petroleum reserves – it is an essential precursor to new project developments and ensuring a continuity of energy supplies.

Past investment in oil and gas exploration has supported Australia’s economic performance over the last decade. It has, and will continue to provide, significant benefits to future generations of Australians.

Petroleum exploration in Australia has trended sharply downwards over the last two decades. The number of wells drilled and seismic surveys run remains at low levels, particularly offshore.

Chart 3: Annual exploration well activity and West Texas intermediate oil price



Source: Energy Information Administration, APPEA

¹⁸ EIA, see www.eia.gov/todayinenergy/detail.php?id=34872.



Regulatory frameworks should support exploration

An efficient and competitive regulatory regime is crucial to ensure ongoing investment in Australia's petroleum industry. This is particularly important for the exploration as the incentive for companies to explore in Australia continues to be challenged in the face of high costs, an intricate regulatory framework and declining prospectivity in mature basins.

Increasing uncertainty about the timing of approvals from regulators increases costs. As an example, regulatory uncertainty prevents companies from co-ordinating the use of international drilling and seismic equipment, where significant cost savings can be achieved when the timing of approvals is predictable.

In 2013, the Productivity Commission investigated the non-financial barriers to exploration in Australia.¹⁹ They found a number of factors that may affect business investment in exploration. These included tenure allocation, environmental management and regulatory burden, precompetitive geoscience and workforce issues.

In November 2015, the federal Government undertook the Offshore Petroleum Resource Management Review.²⁰ Many of the recommendations from the review canvassed strategic actions that could be implemented to increase investment, with a view to improving certainty and flexibility, reducing undue regulatory compliance costs, and attracting efficient, timely investment and development. Few changes have been made since this report was released.

In 2017, the federal Government undertook targeted reforms for offshore exploration policy. Policy and administrative changes are being contemplated that may lead to the replacement of the annual acreage release regime with a more streamlined system. The industry is prepared to consider changes that are meaningful and practical from the industry's perspective.

Precompetitive Information should be supported

The provision of geoscientific data by the Commonwealth and state/territory governments significantly aids exploration decisions made by industry.

A major barrier to exploration, particularly in new and frontier basins, is the absence of sufficient geological information to allow exploration investors to make well-informed decisions. The understanding of prospectivity is a primary consideration for exploration companies, but such assessments are fundamentally dependent upon an infrastructure of geoscience data, concepts and knowledge which provide the framework of successful exploration.

Petroleum exploration differs from many other economic activities in three important respects:

- uncertainty of geology
- long periods of time between exploration and the generation of an income producing asset
- high levels of risk.

¹⁹ Productivity Commission, [Mineral and Energy Resource Exploration Draft Report](#), May 2013.

²⁰ Commonwealth of Australia, Department of Industry, Innovation and Science, [Offshore Petroleum Resource Management Review](#), November 2015.



The provision of pre-competitive geoscience by Government agencies assists in mitigating these exploration challenges and attracting exploration investment by allowing industry to identify areas of favourable potential. Pre-competitive geoscience increases exploration efficiency by making it unnecessary for companies to duplicate common information or spend money on non-prospective ground and assists with risk-based decision-making. By reducing exploration costs and risk, pre-competitive geoscience not only improves returns on private investment but also increases revenues accruing to governments by way of royalties and taxes.

Numerous reviews have concluded a sound business case for the provision of pre-competitive geoscience based on its public good attributes, spill over benefits and its role in reducing risks. Strategic reviews of Geoscience Australia by the Department of Finance and Deregulation in 2011 and the Australian National Audit Office in 2010 found that the provision of precompetitive data is underpinned by a sound business case in terms of facilitating development of community owned resources.²¹²²

Importantly both reviews found that providing pre-competitive data has strong 'public good' attributes in terms of being products that, once created, may be accessed by any user without diminishing their availability to other users (non-rivalry in consumption) and for which any restriction on access either creates unacceptable efficiency or welfare losses or is not practical.

APPEA recommends that the governments at federal and state levels re-commit to long term support of pre-competitive data research and working with industry to improve data quality. A priority needs to be placed on ensuring collaboration and coordination across governments and inter-government agencies.

Environmental Regulation

Inefficient and costly approvals processes and regulations can be a significant impediment to the industry's growth. The potential for delays in project development due to inefficient regulation can have a significant impact on investment and is a concern for investors. In its 2013 report on *Major Project Development Assessment Processes*²³, the Productivity Commission estimated that the indicative cost of a one-year delay to a major liquefied natural gas project is in the order of \$500 million to \$2 billion, depending on assumptions made. The central estimate of \$1.1 billion represents a reduction in the net present value of the investment by about 9 per cent. The equivalent cost of delay for a major project of more average size (with capital expenditure of \$473 million) might be around \$26 million to \$59 million.²⁴

Promoting clear and efficient regulation

APPEA supports strong and independent regulation that sets an objective and science-based framework for reducing risk while providing certainty to industry. The Federal Government's "Principles for Australian Government Policy Makers" provides an important set of criteria against which regulatory frameworks should be assessed.

The Australian oil and gas industry supports a legislative framework that efficiently and effectively facilitates safe oil and gas exploration, development and production that is environmentally and

²¹ Commonwealth of Australia, Department of Finance and Deregulation, [Strategic Review of Geoscience Australia](#), May 2011.

²² Commonwealth of Australia, Australian National Audit Office, [Audit report No. 22 2009-10 Geoscience Australia](#), February 2010.

²³ Productivity Commission, [Major Project Development Assessment Processes](#), November 2013.

²⁴ Ibid p. 201.



socially responsible. The legislative framework must be based on sound science and administered by a competent and well-resourced regulator. The industry supports legislation that is effective in addressing problems, and efficient in maximising the benefits of that regulation while taking costs into account.

APPEA urges Australia's governments to continue to promote and implement reform to deliver regulation that is:

- only necessary where it is required to meet a policy objective;
- underpinned by sound science and evidence;
- objective-based, and does not place unnecessarily prescriptive conditions on operators;
- appropriate to the nature and scale of the project (for example when considering application of the water trigger or public comment on offshore exploration activities);
- supported by extensive guidance provided to operators; and
- considered in the context of all legislation – at Commonwealth, state and local government levels – to ensure that conflicting objectives are identified and minimised.

Regulatory Improvements

Regulatory reform can improve efficiency and reduce project risk without compromising standards of safety, environmental protection and resource management. Changes could yield significant cost savings for both government and industry. Conversely, increasing regulatory duplication, inefficiency and uncertainty are costly and a deterrent to investment. APPEA first raised this issue in its 2013 report; *Cutting Green Tape*.²⁵

The regulatory framework for oil and gas activities in Australia is complex. One reason for this is a result of different agencies being responsible for regulation and the suite of legislation in place. For instance, an onshore gas company in Queensland must comply with more than 70 pieces of state and federal legislation, plus numerous additional regulations, associated operational, and local council regulations. A report presented by the Queensland Government indicated that regulation accounted for a significant percentage of costs, particularly during the exploration phase of the industry's activities.

There is considerable potential to achieve regulatory reform to reduce cost, increase productivity, and support further investment without compromising standards of safety or environmental protection. Several inquiries have investigated the regulatory burden on the petroleum industry, including:

- the *Senate Select Committee on Red Tape Interim Report (2017)* – which provides information on the regulatory framework and recommendations for improving the framework;²⁶
- House of Representatives Environment Committee (2014) – *Streamlining environmental legislation: Inquiry into streamlining environmental regulation, 'green tape', and one stop shops*;²⁷
- Productivity Commission (2013) *Major Project Development Assessment Processes*;²⁸

²⁵ APPEA, *Cutting Green Tape: Streamlining Major Oil and Gas Project Environmental Approvals Processes in Australia*, February 2013.

²⁶ Senate Select Committee, *Environmental assessment and approvals*, 2017.

²⁷ House of Representatives, Standing Committee on the Environment, *Streamlining environmental legislation: Inquiry into streamlining environmental regulation, 'green tape', and one stop shops*, December 2014.

²⁸ Productivity Commission, *Major Project Development Assessment Processes*, November 2013.



- Productivity Commission (2012), *Non-financial barriers to resources exploration. Ensuring that regulation and approvals processes achieve certainty, predictability and proportionality is critical for industry and stakeholders for continued investment in oil and gas activities in Australia*; and
- Productivity Commission (2009) *Review of the Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector*.²⁹

Regulatory Streamlining

Progress has been made on regulatory streamlining. For example, the 2012 Strategic Assessment of NOPSEMA effectively reduced duplication between the *Environmental Protection and Biodiversity Conservation Act 1999* and the requirements of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.

However, additional reforms in both onshore and offshore jurisdictions should be further considered to improve the investment framework with a view to reducing costs and providing greater certainty in terms of outcomes and timeframe, for both governments and industry. Key areas of concern include:

- Cross jurisdictional activities – inconsistent obligations on parties operating individual projects across multiple jurisdictions.
- Multiple agency regulation – regulatory overlap and duplication posing additional burden on industry to meet numerous requirements from different agencies covering a single project.
- Inconsistency in regulation – inconsistent implementation, application and interpretation of legislation across jurisdiction/s, agencies and within agencies causing uncertainty in terms of compliance.

The following changes should be considered for their potential to reduce burden and improve efficiency:

1. Fast-track bilateral arrangements for accreditation by the Commonwealth of state processes and create a 'one-stop-shop' for state assessment and decision processes under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
2. Greater consistency between state and Federal agencies on information requirements for assessment to reduce duplicative regulatory processes and discrepancies in information requests.
3. State agencies to confer environmental approvals to NOPSEMA in state waters under the EPBC Act.
4. Refine and reduce the triggers under the EPBC Act (national threatened species lists, refine the catch-all trigger of 'the Commonwealth Marine environment').
5. Removal of the 'water trigger' under the EPBC Act.
6. Clarification of the roles and responsibilities of state and Commonwealth agencies.
7. Streamline reporting within Commonwealth and state processes, such as removing duplicate reporting to agencies and adding statutory timelines on regulatory agencies.
8. More specific guidance from NOPSEMA when issuing Requests for Further Information. Improved clarity of information required to support decision making will streamline the approvals process, including reduced regulatory effort to assess permissioning documents.

²⁹ Productivity Commission, [Review of Regulatory Burden on the Upstream Petroleum \(Oil and Gas\) Sector](#), April 2009.



In addition to the above noted impediments, an emerging issue that can impact business investment decisions is infrastructure. Given Australia's vast size, remote terrain and distance from markets (both domestic and export), many projects cannot individually underpin the infrastructure required to undertake high cost exploration and/or production activities. This presents challenges for both industry and governments. Government funding decisions need to consider key multi-user infrastructure to better connect resource to markets, while industry needs to identify options where both existing and new infrastructure can be jointly utilised to reduce costs and open up new opportunities

We would be pleased to provide further details on the issues raised above.

Yours sincerely

Malcolm Roberts
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