

**Submission to the
House of Representatives
Standing Committee on Economics**

'Inquiry into tax deductibility'

**AUSTRALIAN PETROLEUM PRODUCTION & EXPLORATION
ASSOCIATION (APPEA) LTD**

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Overview and Executive Summary

66. While the economic modelling of the potential impacts of broadening the business tax base and lowering the company tax rate was not completed, in theory it may be possible for specific options to have an overall negative impact on GDP and household consumption. If the price responsiveness of the supply of international capital to the removal of existing tax concessions is greater than the price responsiveness of capital to a reduction in the company tax rate, then overall investment, productivity and wages could fall in response to a lower rate, broader base package.
67. For example, a company tax rate cut funded by a reduction in the diminishing value method rate of depreciation to 150 per cent (from 200 per cent) would likely benefit highly profitable projects, but theoretically may not increase investment if these projects would go ahead regardless. In contrast, more marginal projects may receive less benefit from a rate cut than the cost they incur from lower depreciation allowances, causing some to become unviable and reducing overall investment. Therefore, it is possible that some packages may not increase GDP or household consumption.

Business Tax Working Group – Final Report (November 2012)

The Australian Petroleum Production & Exploration Association (APPEA) is the peak national body that represents companies engaged in oil and gas exploration and production operations in Australia. APPEA's members account for more than 95 per cent of Australia's oil and gas production, and the vast majority of petroleum exploration.

The 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;
- the direct payment of billions of dollars in taxes and resource charges to governments;
- the direct employment of tens of thousands of Australians; and
- the generation of significant amounts of export earnings.

The industry is truly global in nature and each Australian project must compete against other international projects for investment from a limited pool of international funds for both exploration and production activities. Oil and gas funding that is lost from the Australian oil and gas industry will not be spent in other parts of the Australian economy - it will be redirected to Australia's overseas competitors. While the industry has committed to the development of a number of large scale gas projects over the last decade, the new generation of investments (and extensions to existing and committed projects) will be heavily dependent on the terms of the company tax system, as it has an important impact on project economics.

In the context of the Committee's inquiry into aspects of the personal and company tax system, it is recommended that:

- The existing taxation treatment of **exploration expenditure** be fully retained. The provisions recognise the uncertainties associated with exploration and the outcomes of a succession of past reviews that have confirmed the appropriateness of the present treatment.
- The existing **capital depreciation** provisions (statutory effective life caps) as they apply to oil and gas assets be retained. Significant sums of company tax are already payable well before

an investor is able to recoup their invested funds, while the depreciation provisions in Australia still do not compare favourably with those in other gas producing countries.

- The retention of the current thin capitalisation provisions for determining **interest deductibility**, recognising the significant challenges associated with introducing modified arrangements for capital intensive industries which are subject to significant fluctuations in product prices.

Any changes that tilt the incidence of the company tax system against the capital intensive and risk taking sectors of the Australian economy through denying the deductibility of costs of doing business will fundamentally impact on the ability of Australia to attract legacy projects and to create sustainable taxation revenue streams for future generations. Overall, Australia needs a diverse private sector that encourages risk taking, not one that simply rewards industries that provide services to other sectors of the economy.

Industry Information

By 2020, the sector's economic contribution will potentially more than double to \$70 billion per year, while 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 per year.

On average, taxes account for just under half of the industry's overall level of pre-tax profit.

In the period 1955 to 2011, a total of 4,248 conventional exploration wells were drilled in onshore and offshore Australia, with only 1,200 being classified as discovery wells. 585 (or less than 14 per cent of wells drilled) led to production.

Many successful exploration wells have yet to be commercialised, some having been discovered more than 30 years ago.

SECTION 1: THE AUSTRALIAN OIL AND GAS INDUSTRY - AN ECONOMIC CONTEXT

“Australia’s continuing economic and social benefits resulting from its mineral and energy resource wealth is mostly the result of discoveries made decades ago and it is important to recognise that major discoveries have a long lead time to bring into production, commonly over a decade.

“Although the resources being mined currently are available to continue to support the country’s economy, new discoveries need to be made to replenish resources and ensure continuing supply and production into the future.”

Dr Chris Pigram, CEO, Geoscience Australia, 19 September 2012

1.1. Introduction

Since the late 1960’s, oil and gas exploration and production has played a significant role in the Australian economy. The industry has been pivotal in the supply of energy to Australia and many of our key trading partners. The growth of the industry has provided many benefits to Australia.

The position of the industry today as an emerging global leader in the supply of natural gas to the world has to a large part been underpinned by the application of a range of important tax settings. These have assisted investors commit the vast sums of capital necessary to both find and develop the resource base. Importantly, they have generally created a stable framework that has provided investors with the confidence to respond to the competition challenges from other countries.

Changes to cost structures as a result of tax modifications can have significant implications in capital intensive projects with long lead times. Changes can negatively impact exploration and development decisions. While investments in the industry have been significant to date, future decisions will be dependent on a fiscal regime that balances risk with reward. To capture future opportunities, it is critical that the company tax regime remains structured in a manner that does not discourage investments in risk taking and value adding activities.

1.2 The National Economic Contribution of the Industry

The industry is approaching the end of a wave of new investments in gas projects that has led to one of the largest commitments of funds in Australia’s history. Further investment in the oil and gas sector is within reach, however it is by no means assured. There are a number of national and state areas of policy in which complacency may threaten Australia’s attractiveness as a place to do business.

The existing growth is underpinned by Australia’s position at the cusp of a major shift in the world’s economic weight from west to east. Global growth has been driven by the rapid industrialisation of China and other large Asian economies, such as India. This has changed the dynamics of key international resource, product and capital markets. For Australia, this has translated into strong demand for our energy resources.

The economic advance of our region is overwhelmingly positive for Australia. It plays to our comparative advantage as a secure and reliable energy exporter, our proximity to markets and being an open economy that encourages foreign investment. However, the continued growth of the oil and gas industry cannot be taken for granted as we are becoming an increasingly high cost investment destination relative to other oil and gas producing countries.

Understanding The Economic Contribution of Australia's Oil and Gas Industry

A number of studies published over the last five years have confirmed the contribution that the industry will continue to make to Australia's prosperity. Below is a sample of the results.

- **National Economic Benefits (Deloitte Access Economics 2012)**

In 2012, Deloitte Access Economics (DAE) undertook an economic study of the sector, quantifying the output and how it will potentially grow over time. DAE also analysed the economic impact of the industry, recognising the unprecedented level of capital investment committed and the value of increased production. This captures the industry's contribution over and above its significant production and export profile.

The analysis covers the economic contribution through the direct impact of oil and gas operations and the flow-on contribution of oil and gas projects. In 2011, the sector contributed \$28.3 billion to the economy – accounting for 2.0% of GDP. The extractive processes and related refining operations are extremely capital intensive and value adding. Of this, \$4.3 billion was found to be flow on contributions distributed among supplying industries: exploration support and professional services, maintenance and construction, transport and storage and wholesale trade in Australia. The linkages between sectors have significant regional, interstate and international dimensions.

While the existing economic contribution is substantial, the future contribution is expected to be even more significant. The committed expansion is forecast to increase output by \$68 billion in 2020 and \$63 billion in 2025. The share of the oil and gas industry and associated exploration activities to GDP increases from 2.1% to 2.5 % in 2025 – peaking at 3.5% in 2020. On the back of considerable expected production growth, the oil and gas industry is forecast to make a substantive contribution to government revenues – \$93.6 billion in net present value terms (2011 dollars for the period 2011 to 2025). These projections are indicative only given the volatility of commodity prices and cost structures for individual projects. Over the period to 2025, GDP is expected to increase by just over \$260 billion in NPV terms.

(See http://www.appea.com.au/wp-content/uploads/2013/04/120625_DAEreportAPPEAfinal.pdf for more details.)

- **Australian Oil and Gas Industry Value-Adding (PwC 2014)**

Australia's oil and gas industry has arguably underpinned much of Australia's economic prosperity and growth over the last decade. A 2014 PwC report, *Value Adding: Australian Oil and Gas Industry*, shows that:

- The oil and gas industry directly accounts for around 2 per cent of GDP, with value-added of about \$32 billion in 2012-13.
- The contribution of the oil and gas and exploration sectors is projected to double to about \$53 billion in 2019-20 and \$67 billion in 2029-30.
- The annual value of natural gas exports is expected to be \$60-70 billion by 2019.

- After accounting for its inter-linkages with the rest of the economy (businesses all over Australia supply goods and services to the oil and gas industry, and the use of fly-in, fly-out staff is spreading the benefits of the industry), the sector is projected to be around 3.5 per cent of national output in 2030.
- By 2020, the sector's economic contribution will more than double to \$70 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.

(See <http://www.appea.com.au/wp-content/uploads/2014/11/PwC-Report-Oil-and-Gas-Industry-Sept-2014-FINAL.pdf> for more details.)

- **The Queensland Coal Seam Gas Industry (ACIL Tasman 2014)**

The potential benefits of the growth of Queensland's coal seam gas sector were evaluated by ACIL Tasman in 2012. It was estimated that the expansion of the gas industry has the potential to increase Gross State Product in Queensland by half a trillion dollars in the coming decades, boosting employment, wages, and the state's reputation as an economic powerhouse. The industry's activities will be responsible for more than 20,000 full-time equivalent jobs each year by 2035.

The report also finds in the years 2015 to 2035, the expansion of the Queensland CSG industry could:

- Increase real Australian Gross Domestic Product by \$516 billion;
- Place downward pressure on wholesale electricity prices, reducing prices by 10%;
- Pay a further \$275 billion to governments in taxes and royalties; and,
- See Queensland real income rise by \$342 billion, or \$28,300 per person.

(See http://www.appea.com.au/wp-content/uploads/2013/05/120606_ACIL-qld-csg-final-report.pdf for more details.)

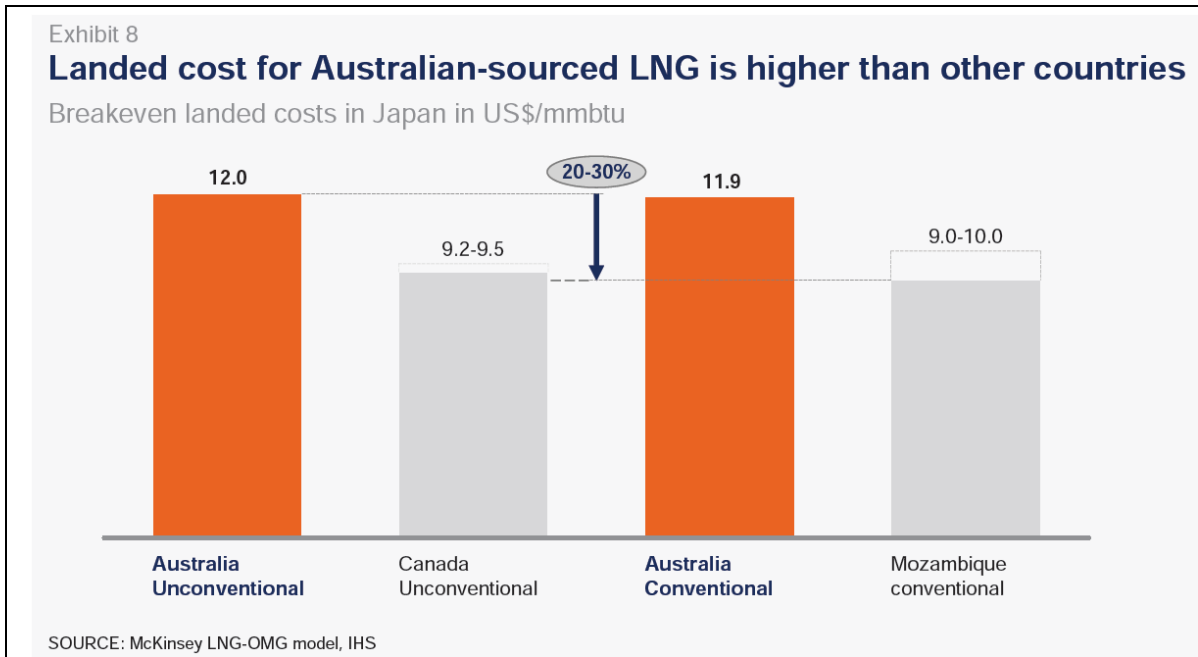
Industry Cost Challenges

In addition to the actual and potential benefits of the sector, there nevertheless remain a number of challenges that the sector must address if it is to realise the potential benefits.

- **Improving Competitiveness (McKinsey & Company 2013)**

A report prepared in 2013 by McKinsey & Company in relation to extending the LNG boom in Australia highlighted the size of the potential prize for the country and the challenges of capturing that prize. In terms of costs, Australia faces significant challenges, as demonstrated by the comparison below.

Chart 1.1: Australia's Cost Challenge - LNG



Source: McKinsey & Company (May 2013)

Australia is up to 30 per cent more costly to supply LNG compared with a number of potential competitor countries.

(See http://www.appea.com.au/wp-content/uploads/2013/07/Extending_LNG_boom_McKinsey.pdf for more information.)

- **Transitioning from Construction to Production (Accenture 2015)**

In 2015, Accenture examined the transition of investment in the Australian LNG industry from a construction to a production focus. In addition to confirming the growth in GDP, demand for operational services and the overall expenditure in the operating phase of production, a detailed analysis was undertaken and a number of observations were made about the capabilities and challenges that confront the industry.

Accenture developed a Services Sector Readiness Index (SSRI) with a scale of 0 to 1.0 to measure the degree of confidence in the five key dimensions of readiness. While the views of stakeholder varied slightly across segments of the production and supply chain, there was general agreement about the readiness of the sector.

Overall, out of a maximum score of 1.0:

- Workforce capacity was rated at 0.58
- Workforce capability was rated at 0.68
- Competitiveness was rated at 0.37
- Regulatory framework was rated at 0.40
- Industrial relations framework was rated at 0.32.

The results show confidence in capacity, given a relatively high level of workforce skills. Capability also rated highly, due to service providers optimising their operating models, investing in skills development and effectively using operational and information technologies. Efforts to improve

capacity and capability would provide a workforce well suited to the demands of LNG operations and the development of a top quartile performance culture. However, the results show there is considerable room for improvement in competitiveness, regulation and industrial relations.

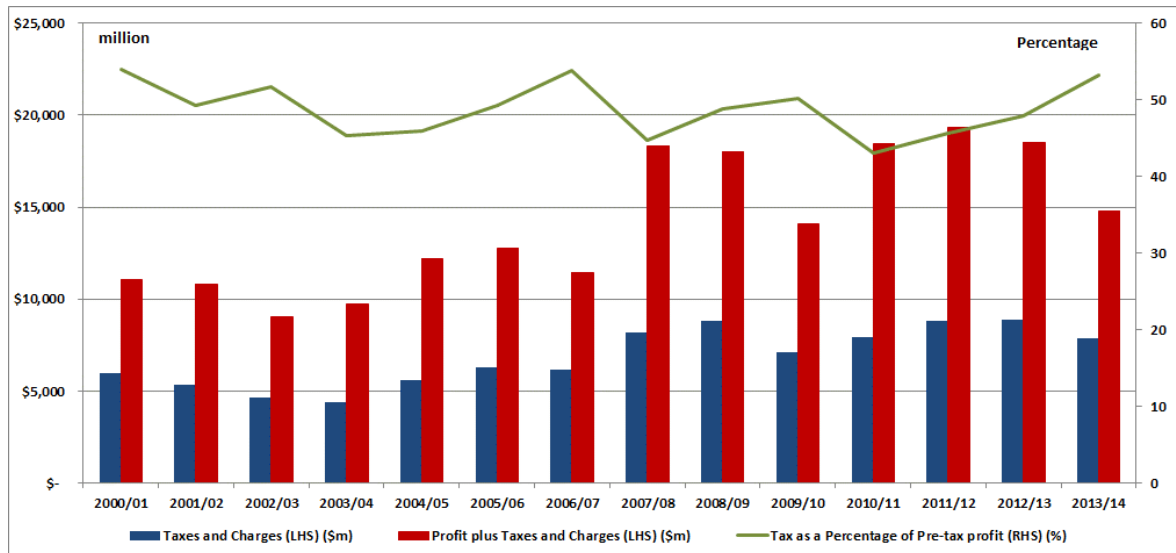
(See <http://www.appea.com.au/2015/05/red-tape-industrial-relations-could-stifle-lng-potential> for further details.)

1.3 Industry Tax Contribution

The industry is confronted with a variety of taxes, charges and fees in relation to petroleum activities. These include resource taxes (including the petroleum resource rent tax, petroleum royalties and production excise), company income tax and numerous other taxes, fees and charges ranging from import duties to state based licence fees and duties.

Annual industry financial survey data compiled by APPEA indicates that, on average, taxes account for just under half of the industry’s overall level of pre-tax profit. See Chart 1.2.

Chart 1.2: Estimated Petroleum Industry Profit (Before Tax) and Tax Payments



Source: APPEA Financial Survey

In terms of the segmentation of the two primary forms of taxation paid by the industry (company tax and resource taxes), total payments have averaged around \$8 billion per year over the last five years, with company taxes estimated to account for slightly more than half of the total amount paid.

SECTION 2: PETROLEUM EXPLORATION

“There is no preferential treatment for the resources industry in our tax system, but it is worth noting that they are the largest beneficiary of a program [fuel tax credit] that is available to everyone. If we are going to find the resources of the future that we need to support and grow our economy, we need the best technology driving the exploration processes. Most exploration—let's be clear here—actually finds nothing. It is difficult. It is a risky kind of business to be in but, once a resource is found and the work is done, all expenses have been made and an efficient tax treatment makes sense. Significantly, neither the Treasury nor the Productivity Commission consider the rebate to be a form of industry assistance.”

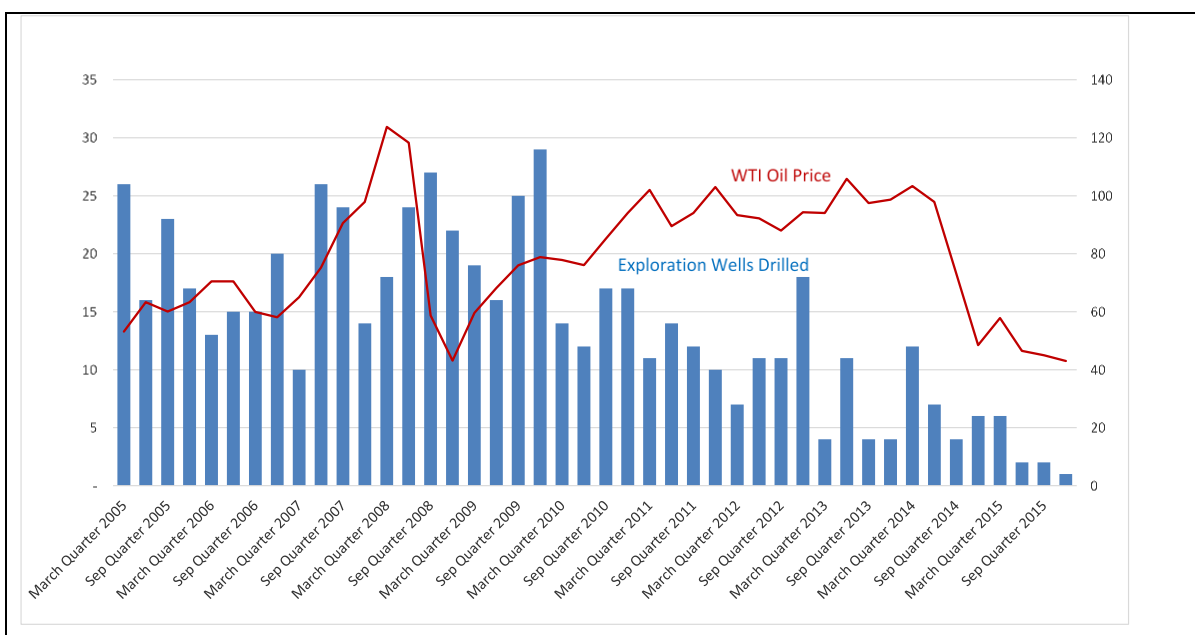
Senator Sam Dastyari, Senate Hansard, 26 November 2015.

2.1 Petroleum Exploration Activity in Australia

The long-term growth of the industry is dependent on the level of exploration. Oil and gas cannot be produced without first locating commercially viable resources and these cannot be discovered without undertaking exploration.

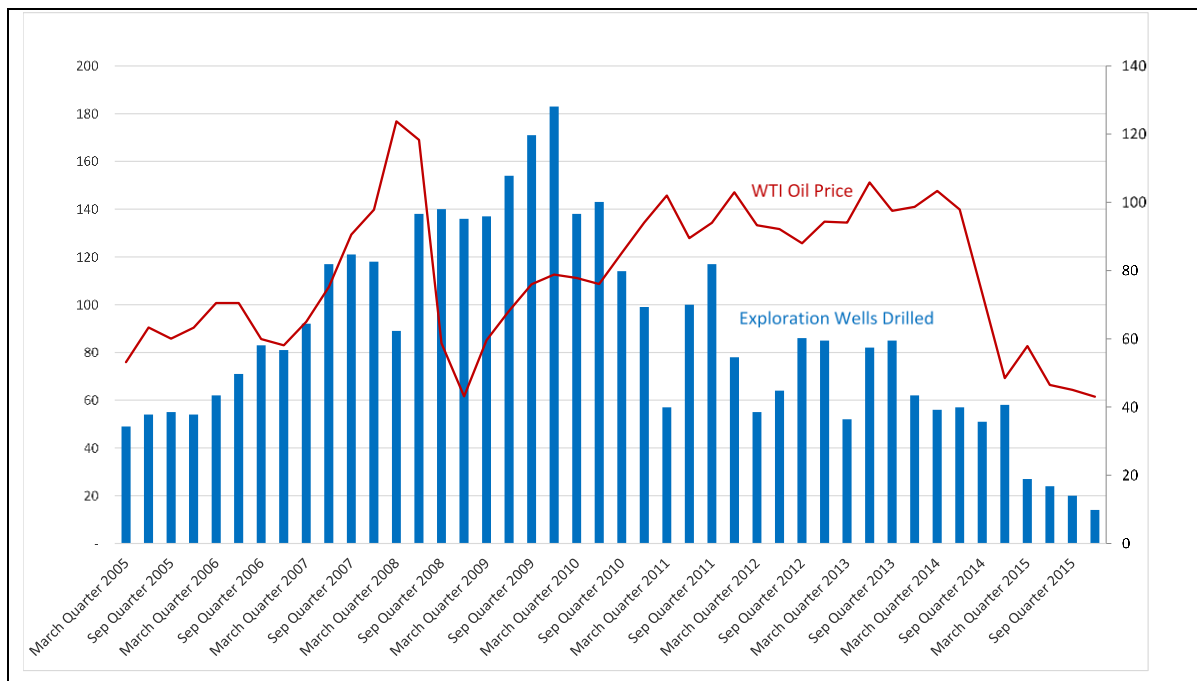
There are a number of indicators that can be used to measure the level of exploration activity. Charts 2.1 and 2.2 highlight the trends in quarterly exploration drilling in onshore and offshore areas in the period covering 2005 to 2015, together with the oil price in \$US's. There has been a noticeable decline in the level of activity since the beginning of the decade. This fall is likely a consequence of a number of factors, including regulatory impediments, perceptions about the prospectivity of acreage that has been released by governments and the oil price.

Chart 2.1: Offshore Exploration Wells Drilled and Oil Price – Quarterly
(LHS wells drilled, RHS WTI Oil Price \$US barrel)



Source: APPEA, Federal Reserve Bank of St.Louis

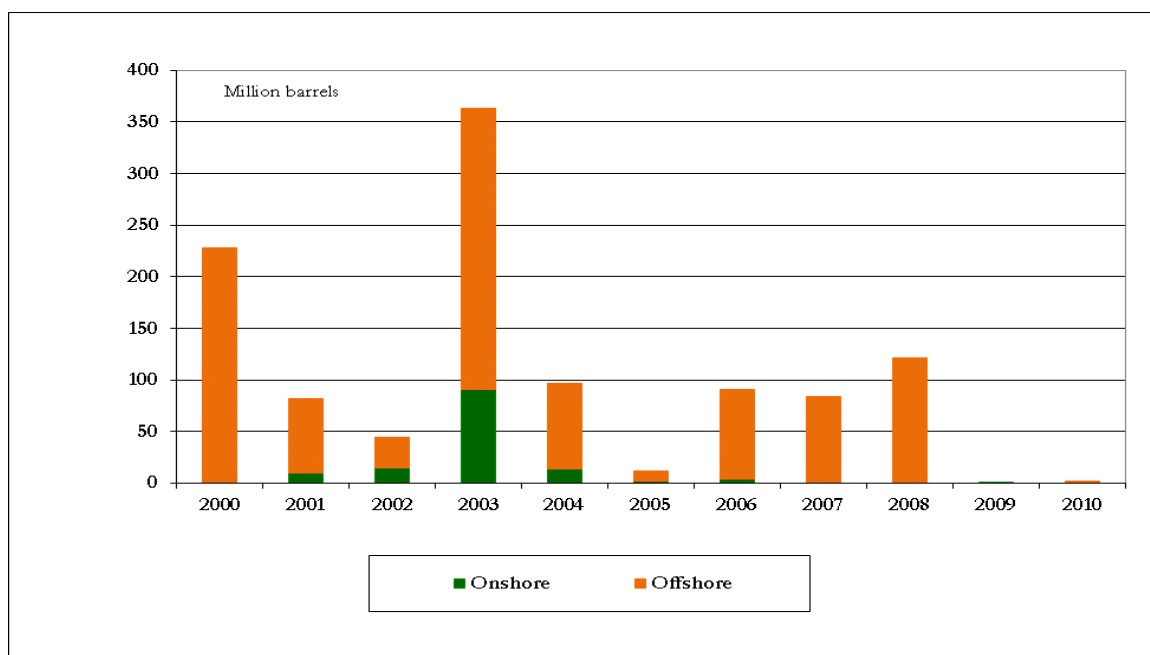
Chart 2.2: Onshore Exploration Wells Drilled and Oil Price – Quarterly
(LHS wells drilled, RHS WTI Oil Price \$US barrel)



Source: APPEA, Federal Reserve Bank of St.Louis

Australia is heavily dependent on oil and gas for energy. Our known oil reserves are in decline. However, known gas reserves are extensive, but are often in deep water offshore areas or locations distant from major population centres. Exploration has been a crucial activity to achieve the current level of local sufficiency and reserves, and continuing exploration is required if Australia is to secure its future energy requirements.

Chart 2.3: Discoveries of Liquid Petroleum – 2000 to 2010



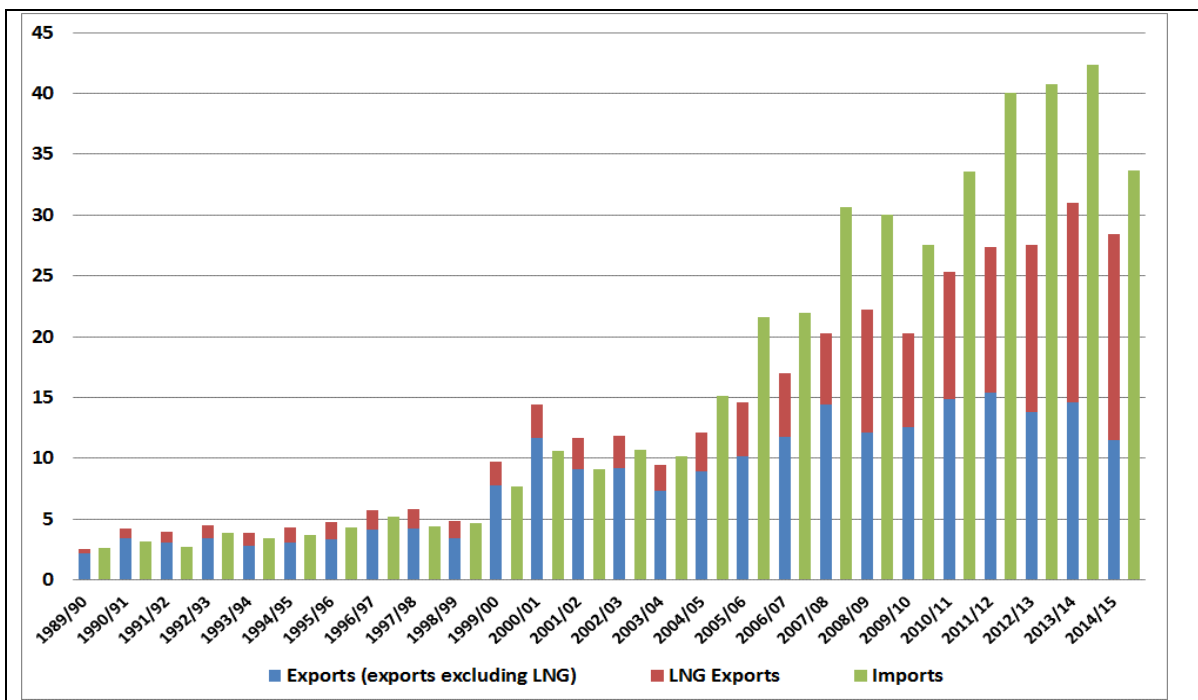
Source: Geoscience Australia

Exploration provides greater certainty about Australia’s available petroleum reserves. The importance and value at any point in time of undertaking exploration for future production is highly dependent on the current level of identified reserves and the economics of tapping those reserves.

Over the five years from 2006 to 2010, less than 300 million barrels of liquid petroleum was discovered (Chart 2.3), whereas Australia’s consumption of refined petroleum products totalled more than 1,500 million barrels over the same period.

After enjoying a significant period of self-sufficiency in crude oil and condensate during much of the later part of the last century, Australia is now in a position where it is no longer self-sufficient. While Australia is now a net importer of crude oil and oil products, exports of LNG are assisting in reducing the gap between imports and exports (see Chart 2.4)

Chart 2.4: Australian Trade in Petroleum and Petroleum Products (\$ billion)



Source: Various

Major uncertainties around indigenous oil supply include the success of efforts exploring in frontier basins and whether these efforts are commercialised.

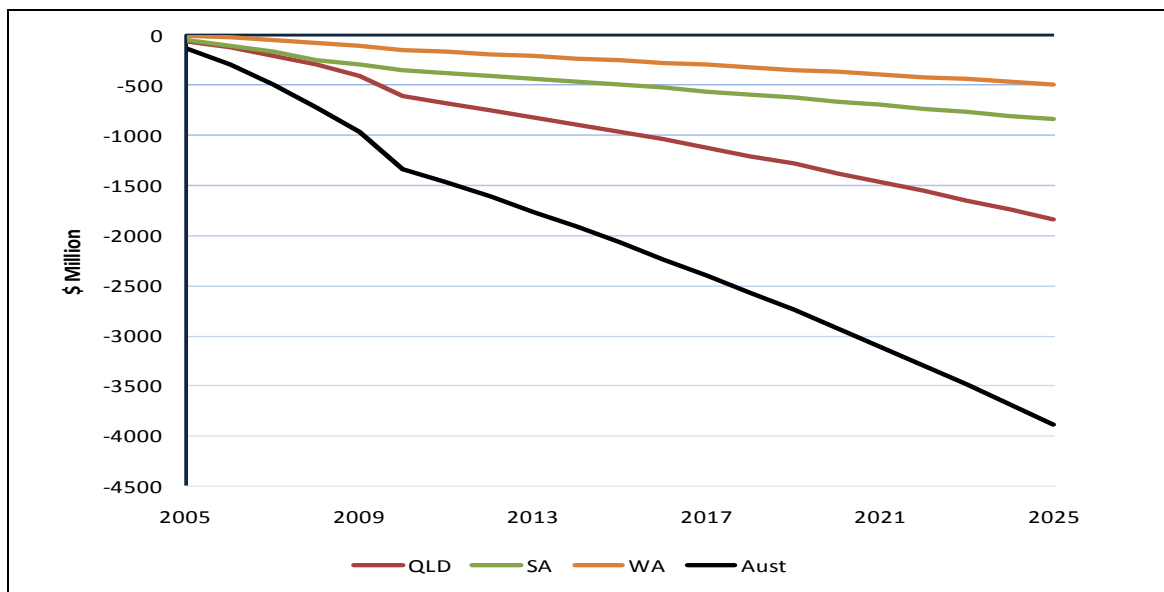
2.2 The Value of Petroleum Exploration to the Australian Economy

While exploration can be considered as a means to an end, it also generates economic activity in its own right. ABS data indicates exploration and other mining support services are significant generators of employment, with expenditure running in the billions of dollars per annum. A significant proportion of expenditures are incurred in Australia and generate flow on effects throughout the economy.

The impacts of ceasing exploration were analysed for the period of 2003-04 to 2024-25 by ACIL Tasman in 2010. As a result of the cessation of exploration activity, there is a consequent reduction in field development and production. A conservative assumption was made given Australia's extensive gas reserves that a cessation of exploration would not affect gas developments to 2025.

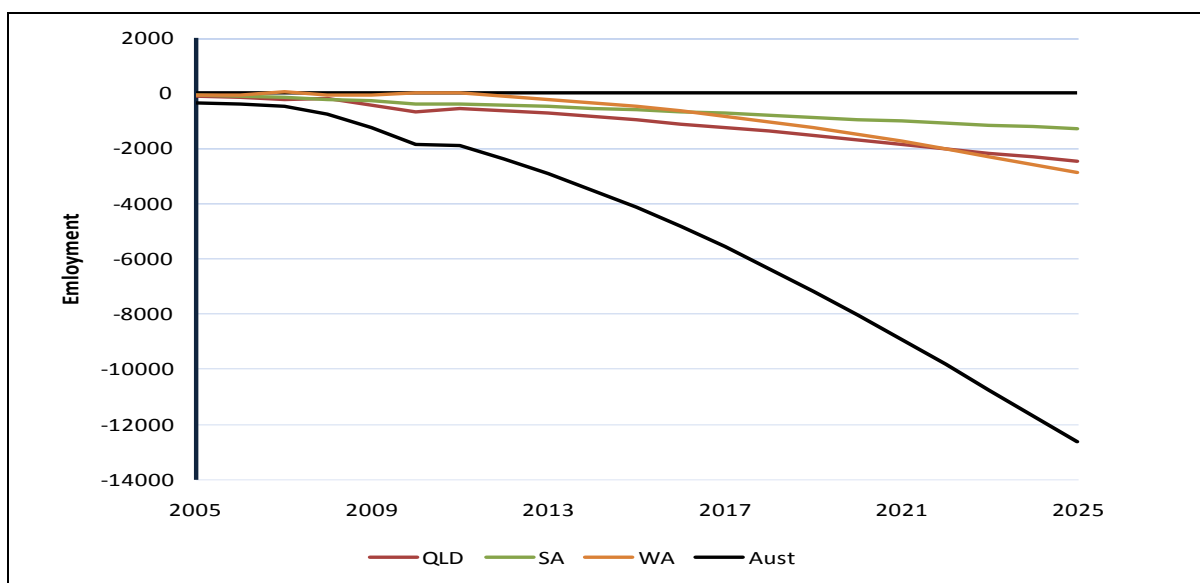
The outcomes of the loss of the oil and gas exploration industry would be significant, resulting in reductions (at a 4 per cent discount rate) of more than \$2.7 billion of GDP, \$2.5 billion of GNP and \$1.4 billion of private consumption expenditure for the nation as a whole over the course of the twenty-year time horizon examined. Chart 2.5 illustrates the changes in GDP on a cumulative basis, and Chart 2.6 illustrates the employment impacts.

Chart 2.5: Loss of Exploration - Cumulative GDP Impact



Source: ACIL Tasman (2010)

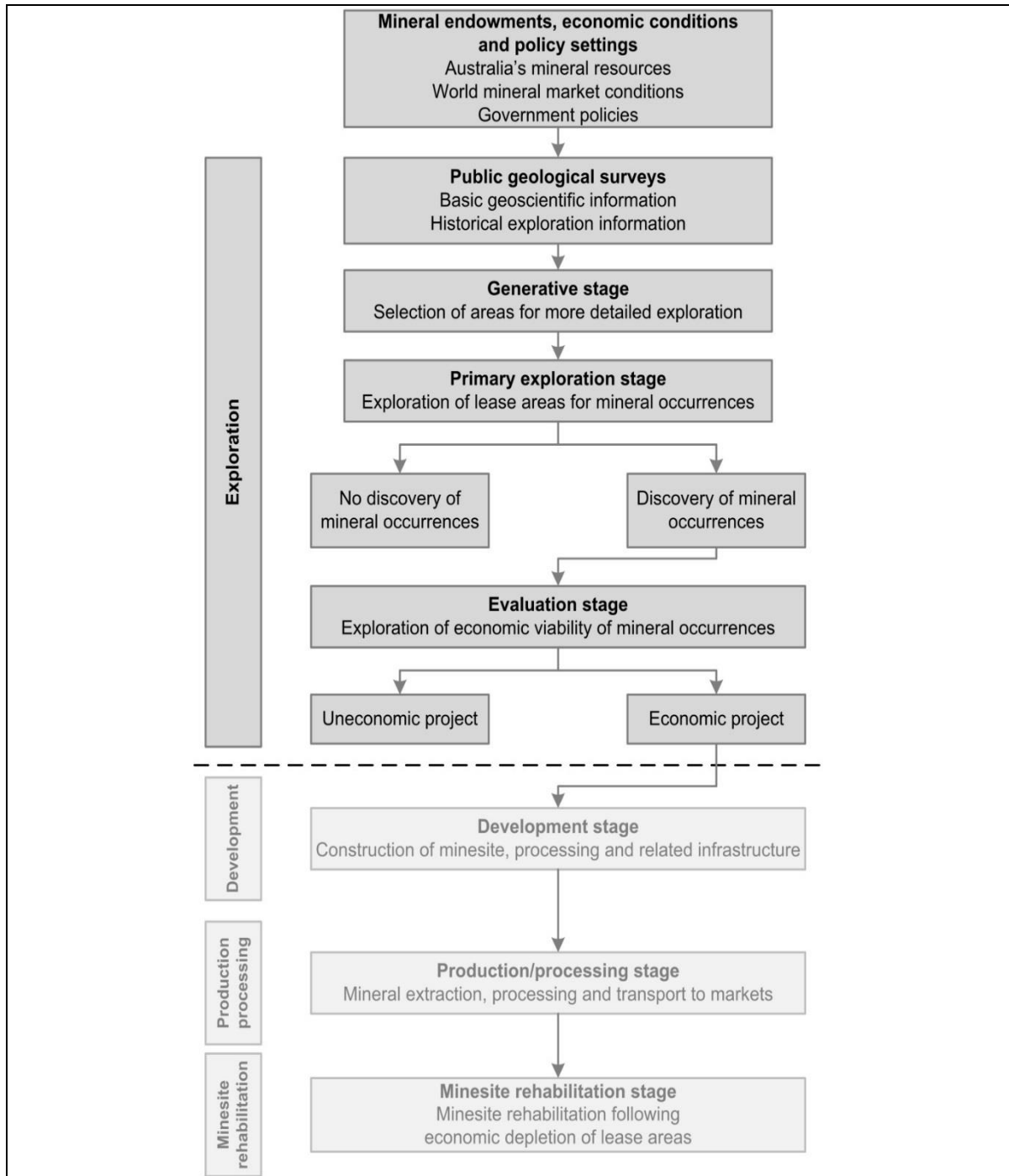
Chart 2.6: Loss of Exploration - Employment Impacts (includes subsequent production impacts)



Source: ACIL Tasman (2010)

2.3 What is Exploration?

Prior to producing oil and gas, companies have to first search for and find hydrocarbon resources. This process involves a commitment to expend significant funds with no guarantee of success. Even once a hydrocarbon discovery has been made, there is no guarantee of its commercial development. Significant funds are also invested in appraisal and feasibility activities to determine if discovered resources can be commercialised.



Source: Productivity Commission

Searching for petroleum typically includes a ranges of activities:

- A regional geological assessment of an area is often required in order to determine its hydrocarbon bearing potential and to ascertain if there are areas that are prospective and over which exploration permits should be acquired.
- Competitive bidding on areas. Generally, governments will release exploration blocks and companies will bid a work program in order to secure a particular block.
- If a company is awarded an exploration permit over an area, it will then conduct activities with the objective of determining the likely location of a hydrocarbon resource. Activities may include:
 - surface mapping (onshore);
 - studies looking to confirm the presence of a hydrocarbon system, presence of suitable source, reservoir and seal rocks, and does the timing of hydrocarbon generation post - date that of trap formation;
 - geophysical surveys such as gravity surveys or magnetic surveys;
 - geophysical surveys such as 2D and 3D seismic with the objective of trying to define a suitable trap.
- Drilling only occurs once a suitable target has been identified. Often, exploration wells are not successful.

If a hydrocarbon deposit is discovered, it then needs to be appraised. Appraisal is the process of acquiring data on the field to assist with determining its potential for commercial development. Appraisal is not about determining everything there is to know about a field. Appraisal is about collecting enough data to have an appropriate level of confidence about the resource when undertaking feasibility studies and determining whether the resource is commercially viable.

Activities can involve:

- The acquisition of additional seismic data;
- More drilling to determine the geographic extent of the field, the ability of the field to produce and how uniform the properties of the field are;
- Studies and activities aimed at filling in the gaps between drilling locations.

The results of the feasibility studies will determine whether the resource is commercially viable and as whether to proceed with the proposed project.

Oil discoveries and exploration are trending downwards

To date, much of the exploration activity undertaken in Australia has been in shallow water mature basins or brownfields onshore areas, with field recovery sizes generally becoming smaller. In the period 1996 to 2009, it is estimated that only 17 exploration wells were drilled in offshore frontier areas and 40 exploration wells were drilled in onshore frontier areas.

Although exploration in proven-prospective or 'discovered' areas should continue to add some new reserves, a game-changing supply outcome for the nation would require discovery of a new province or basin or identification of a previously overlooked system in a currently producing basin. But exploration of such areas is either not happening or happening at a very slow rate, with minimal drilling. There could be many reasons for this behaviour, but the important reasons are likely to centre on understandings of prospectivity and competitiveness for development in areas remote from supplies and services, together with remoteness from markets.

Changing the understanding of prospectivity through further geoscience research and improved national data management systems is a part of the solution that will lead to a follow-on increase

in exploration activity. Changing perceptions will take time, so another equally important part of the solution is to ensure that Australia always offers a competitive package of commercial and fiscal terms.

Australia's Relative Competitive Position

The oil and gas industry by its very nature is highly funds intensive. Tens of billions of dollars of capital is required over the coming decades if exploration is to continue and new oil and gas projects are to be developed. Australia is generally perceived to offer low prospectivity for oil, with relatively low discovery rates and small average field sizes. Gas prospectivity is good, but discoveries are often remote from markets and are becoming increasingly difficult to commercialise.

Petroleum exploration is a very high risk activity. This is best demonstrated by comparing the number of exploration wells drilled with both discoveries and the percentage of discoveries that are subsequently converted to production. Geoscience Australia maintains a detailed petroleum database that records the above information across individual geological basins in Australia.

Some key highlights are:

- In the period 1955 to 2011, a total of 4,248 conventional exploration wells were drilled in onshore and offshore Australia.
- Of the 4,248 wells drilled, 1,200 were considered by Geoscience Australia as being 'discoveries'. A discovery well is defined as a well that recovers petroleum or encounters a producible log pay zone. This represented a 28 per cent success rate as a percentage of the number of exploration wells drilled.
- Of the 1,200 discovery wells, 585 led to production. This represented a 14 per cent success rate as a percentage of total wells drilled.
- If the two most successful basins are excluded from the data set in terms of exploration wells drilled, discovery rates and production, the discovery success rate falls to 20 per cent, while the production success rate falls to slightly less than 9 per cent. For this latter scenario, this means that the success rate is around one in eleven wells drilled.

This data highlights important trends and has significant implications for how such activities need to be recognised within the income tax system. Specifically, such activities are often unsuccessful, they more often than not do not generate petroleum reserves and many decades can pass before an investor is aware as to whether a discovery can ultimately be converted into production.

2.4 Transitioning from Exploration to Production

As indicated above, discovery rates associated with exploration wells are quite low and the conversion of those discoveries into production is much lower. A key element of the petroleum exploration and production process is the timeline between exploration activity and production.

As part of the database maintained by Geoscience Australia, information is also available in relation to the time between when a discovery is made and when production commences. This is relevant in the context of understanding the uncertainties associated with converting a discovery into production, the lengthy time lags that can exist between those decisions and the complexities associated with any income tax treatment other than one that treats such costs as being immediately deductible.

For illustrative purposes, the analysis below has been limited to petroleum basins with an offshore focus.

Table 2.1: Discovery to Production – Key Timelines: Australian Offshore Basins

Length of time between initial discovery and production:	Number
Greater than 20 years	16
Greater than 10 years	32
Greater than 5 years	59
Past petroleum discoveries not yet produced:	Number
Pre 1960	2
1960 to 1970	20
1970 to 1980	33
1980 to 1990	66
1990 to 2000	89
2001 onwards	107

Source: Geoscience Australia (unpublished data)

This data demonstrates the considerable uncertainties that are associated with successful exploration activity. The lengthy time periods between discoveries and when a decision to produce is made demonstrates the impracticalities that would arise if a taxpayer was required to nominate a period over which a discovery may or may not be developed for taxation purposes. In addition, further complexities arise in forecasting or estimating the life over which a field or well would be produced. Factors such as prices, markets and technology will have a significant bearing on the final production life, with estimates most likely fluctuating on a regular basis.

2.5 Taxation Treatment of Exploration

Previous Reviews

The immediate deductibility of the majority of exploration related costs has been a central feature of the income tax provisions for many decades. The treatment was considered as part of the Asprey Taxation Review in the 1970's. In that review, it was recognised that the immediate write-off of such costs was appropriate. It was stated that:

“19.19..... Expenditure on exploration, which is a necessary and continuing part of a mining company's operations, should be treated consistently, whether successful or not. The Committee favours the approach that would make all exploration and prospecting expenditure immediately deductible against assessable income derived from any source. The availability of a deduction upon the lines suggested would constitute an acknowledgement that exploration expenditure is a normal operating expense of a mining enterprise and should be treated as such. This recommendation also answers the submission made to the Committee by a number of mining companies to the effect that, under the present system, when funds awaiting expenditure on exploration are invested by the mining enterprise, any deduction entitlement in respect of exploration expenditure cannot be set off against the income from those invested funds.” Asprey Tax Review, 1975 (p293/4)

The Asprey Review (which had a strong economy-wide focus) was followed in 1976 by a major review into the effects of taxation measures on the mining and petroleum industries in Australia. The Industries Assistance Commission (IAC) Report, *Petroleum and Mining Industries*, examined numerous aspects of the taxation system as it applied to the resources sector. The IAC review confirmed support for the case for the immediate deductibility of exploration related expenditures, and made the following observation:

“Since expenditure on both exploration and R and D represents a necessary operating expense, the criterion of neutrality requires that the manner in which it is allowed as a deduction for tax purposes should be similar in both cases.”

“Many witnesses expressed the view that expenditure on exploration and prospecting represents a necessary and continuing operating expense of a mining company and should be treated consistently whether successful or not. The Commission accepts this view and believes that companies should have greater opportunity to recoup the full costs of exploration.” Industries Assistance Commission Report, *Petroleum and Mining Industries*, 28 May 1976 (p19)

The Industry Commission undertook a review into the Mining and Minerals Processing Industries in 1991 (Report 02/1991), The review covered the suite of royalty and taxations provisions that impact on the resources sector. While recognising that the issues surrounding the treatment of exploration related costs can be complex, the income tax treatment whereby costs are immediately deductible was considered to be the most appropriate. In addition to highlighting that exploration expenditure is an expense unique to mining industries:

“The Commission concludes that although immediate deductibility of exploration expenditure may involve an element of assistance, this 'concession' is the least distorting tax treatment in terms of the efficient allocation of resources.” Industry Commission Inquiry, *Mining and Minerals Processing*, 1991 (p335)

In 1999, the most comprehensive review of the business taxation system was undertaken since the 1975 Asprey Report. The so-called Ralph Review that was commissioned by the Government and examined a wide range of business related taxes. It canvassed the treatment of exploration related costs, and effectively came to the same conclusion as the earlier reviews.

“243 Expenditure on exploration and prospecting will continue to be immediately deductible under the Review's proposals. The strict logic of the generalised approach would suggest that expenditure on unsuccessful exploration and prospecting would be immediately deductible, while successful expenditure would be written off over the life of the resulting asset. However, in many cases there may be significant delays before it is known whether the activity has been successful or before a mine is established. It is largely on the grounds of practicality that the current treatment is proposed to be retained.” Review of Business Taxation, *A Tax System Redesigned*, Report, July 1999 (p55)

“Mining and quarrying exploration and prospecting expenditure

Applying the recommended treatment of expenditure and assets without recognising the valuation difficulties associated with the results of exploration and prospecting expenditure would mean that the tax treatment of this expenditure would depend on the results of the exploration or prospecting activity. Unsuccessful expenditure would

be deductible at the time the activity was abandoned, while successful expenditure would enter the cost base of the project. That is the accounting approach.

It has been a longstanding feature of the current law to allow an immediate deduction for exploration and prospecting expenditure. Allowing continuation of immediate deductibility is justified on the basis that the value of the associated asset cannot be reliably measured. Review of Business Taxation, A Tax System Redesigned, Report, July 1999 (p167)

It is clear that a consistent series of conclusions have been drawn that have broadly confirmed the treatment that exploration related costs should be immediately deductible for income tax purposes.

Overall, taxation plays an important role in determining the level of funds committed to exploration related activities. Companies investing in petroleum exploration can find themselves in a variety of after tax positions, depending whether they are an income tax and/or petroleum resource rent tax paying entity. The ability to claim an immediate taxation deduction is an important factor in influencing exploration decisions.

SECTION 3: DEVELOPMENT AND PRODUCTION

“The benefit to the taxpayer of accelerated depreciation is confined to tax deferral. In after-tax terms, accelerated depreciation increases the net present value of an investment, or its rate of return above what it would be in the absence of accelerated depreciation. Taxpayers value accelerated depreciation because it provides important cash flow benefits. Where a taxpayer has made a substantial up-front capital expenditure early positive cash flows are important in determining the overall rate of return on the project.”

Proposed Reforms to Business Taxation: A Critical Assessment of Some Budgetary and Sectoral Impacts, Parliament of Australia, Parliamentary Library, 10 November 1999.

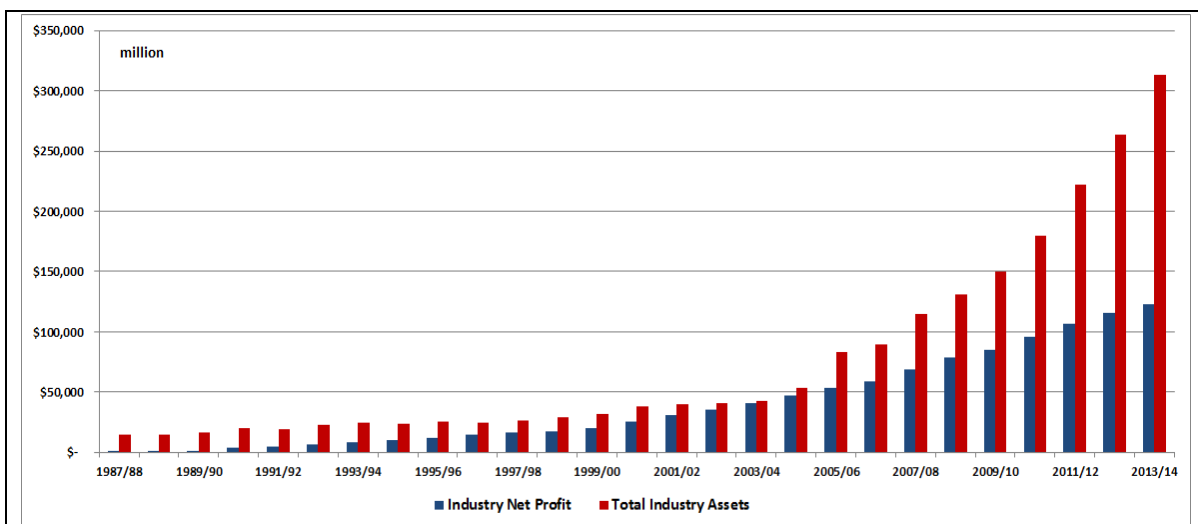
3.1 Industry Investment

The benefits of large scale petroleum projects are numerous and include export income, employment, infrastructure development, income and resource tax payments, payroll tax, regional development, economic multiplier impacts across the economy and energy security.

If the benefits are to be captured, the fiscal regime needs to be internationally competitive in order to attract the risk capital required to develop the discovered resources. The fiscal framework is one of a limited number of factors that can be directly controlled by governments.

Chart 3.1 compares the sectors asset base (a conservative proxy measure for capital investment) with industry cumulative profits over the period since the mid 1980's. This highlights the level of expenditure that has been committed by the industry that is effectively over and above the level of profitability achieved over the period.

Chart 3.1: Petroleum Industry Asset Value and Cumulative Net Profits (\$ million)



Source: APPEA Annual Financial Survey

The petroleum industry is at the forefront of globalisation. Capital is mobile and the vast majority is foreign – it is a reality that the development of the nation’s petroleum resources will be reliant on both foreign capital and expertise.

In terms of pursuing capital, Australian projects are significantly challenged from a cost perspective. This was demonstrated in Section 1 in terms of the cost comparisons across competing jurisdictions.

3.2 Recent Taxation Reforms

Prospectivity and the share of production or profits taken by governments are consistently cited by companies in the petroleum industry as being two of the most important factors affecting investment location choices around the world. As highlighted in Section 1, APPEA estimates that on average, around half of the industry's pre-tax profits are paid to governments.

Petroleum companies are subject to company tax and the full range of other state and federal government taxes applying to businesses more generally, as well as to resource taxes. Over the last two decades, there have been a variety of taxation changes that have affected the upstream petroleum industry. The reforms have been both positive and negative, and have included those outlined below.

Company Income tax:

- reduction in the company tax rate to 30 per cent (positive)
- abolition of accelerated depreciation of five to seven years to one based on the life of plant and equipment (negative)
- introduction of 15/20 year statutory caps for certain oil and gas assets in 2002 and an enhancement to the diminishing value rate for depreciation in 2006 (positive)
- introduction in 2004 of a foreign resident withholding regime associated with construction contracts entered into with non-residents (negative)
- modifications to the loss recoupment (and loss transferability) rules (negative)
- tightening of the living-away-from-home FBT concession (negative)
- introduction of 'first-use' restrictions for certain exploration assets in 2013 (negative).

Resource taxes:

- introduction of the wider deductibility provisions to the PRRT regime for exploration costs in the early 1990s (positive)
- reduction in the uplift rate for general project expenditures (negative)
- introduction of the designated frontier incentive for eligible frontier acreage – subsequently removed (marginally positive)
- transferability of exploration expenditure in the assessment of quarterly instalments and a range of technical enhancements (marginally positive)
- extension of the excise regime to cover condensate production (negative)
- extension of the PRRT regime to onshore areas and the North West Shelf project, without the abolition of existing resource taxes (negative)

On balance, and taking account of the changes made in competitor nations, our reforms have likely resulted in a marginal decline in Australia's relative competitive position.

3.3 Company Tax and Long Life Capital Investments

The tax system plays a key role in influencing investment decisions in the Australian petroleum exploration and production industry. The treatment of capital costs largely accounts for the variable impact of company tax between different business activities in the economy. Costs incurred in non-capital intensive activities (for example, the finance, retail or services-related sectors) are often capable of being deducted relatively quickly, while those that are more capital

intensive in nature (such as in the infrastructure and resource development sectors) are generally deductible over lengthier periods of time.

As a result of the above, there is a natural bias inherent in the current system such that the net present value of costs which can be immediately deducted are usually higher than the value of plant and equipment costs which are generally depreciated at historical cost over extended periods of time. The accelerated depreciation provisions that were in place up until the end of the 1990's helped mitigate against this bias by allowing depreciation quicker than would otherwise have applied based on an assets engineering or effective life.

The Current Depreciation Provisions for Oil and Gas Assets

In 2002, the Government introduced statutory caps for income tax purposes on certain oil and gas assets. The existing caps are:

- 20 years for gas supply (transmission and distribution assets) and oil and gas extraction (offshore platforms) assets; and
- 15 years oil and gas extraction (oil and gas production assets other than an electricity generation assets or offshore platforms) and petroleum refining.

The result is that, in some instances, a taxpayer is able to bring forward a deduction to an earlier income year. The overall deduction over the life of the asset remains unchanged. The introduction of the caps has been an important reason why companies have been prepared to commit the enormous levels of funding required to unlock the nation's gas resources.

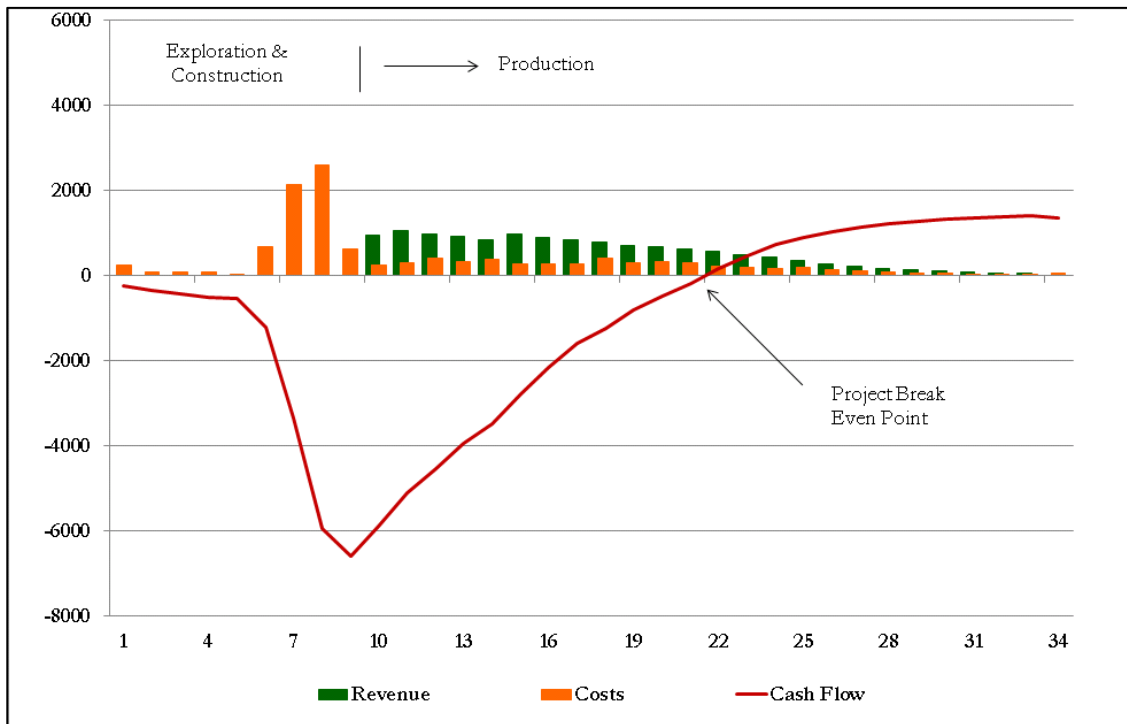
The slight deferment in the timing of the payment of income tax that results can significantly improve the economics of long term capital intensive gas projects (see below). The current provisions still remain well outside the shorter periods over which similar assets can be depreciated in other countries that also compete for funds to produce oil and gas.

Long Lead-Time Items Are Disadvantaged

The negative impacts associated with the use of long write-off periods for plant and equipment are further exacerbated by the significant mismatch in timing that can exist between when costs are incurred and when a tax deduction can be first claimed. While the general principle of 'installed ready for use' forms the basis as to when tax depreciation can be claimed on plant, it is relevant in an economic context to understand that the value of plant often starts to diminish prior to the commencement of production. For example, in the case of large gas projects, development costs are often incurred more than five years prior to the commencement of production.

Chart 3.2 depicts the profile of costs and revenues for a large scale gas project, with a modest construction/development period of four years (the construction periods for some project can exceed five years). The results are presented on a discounted cash flow basis. As can be noted, significant costs are incurred prior to the commencement of production (both construction and exploration), while it takes many years before an investor achieves an overall positive cash flow from the project. In this example, the development costs are incurred four years prior to the commencement of production, and therefore four years prior to when depreciation can be claimed for income tax purposes.

Chart 3.2: Indicative Project Discount Cash Flows (\$ million)



Source: APPEA

In this example, the project does not generate a positive discounted cash flow until year 22, or more than a decade after the project has commenced production. In addition, income tax would be payable almost immediately from the time that production commences from the project. For the purposes of the analysis, taxation payments are factored into the project costs.

Equipment Must Last Longer than the Expected Project Life

The high safety and performance standards that the industry operates within makes it essential that much of the equipment used must have an engineering life considerably greater than the periods for which it is to be physically used. As would be expected, highly controlled conditions must be established to meet the highest standards in equipment reliability. While a piece of equipment may have theoretical design or engineering life of a certain number of years, it is incorrect to assume that this is the operational life of the equipment.

In the context of gas production, sales are often contracted under extremely rigid delivery terms. It is prudent to ensure that equipment is replaced well within design tolerances to ensure a continuity of supply to meet contract terms. The potential impact on customers of delivery disruptions often necessitates a very conservative equipment replacement strategy. For a variety of reasons, plant for gas projects will generally be constructed with a physical life exceeding the term of the initial or foundation contract. Again, the physical life of an asset will not necessarily be a reliable measure as to the economic or operational life of equipment.

For example, a fifteen year gas supply contract may require construction of a fixed offshore production facility and gas gathering pipeline network to service the contract. It is a requirement that the facility operates reliably and safely throughout the 15 year contract, given the worst possible operating conditions. As a result, the facility must operate at a design capacity beyond

the 15 year period to ensure that it remains in a safe and reliable order for the duration of the project. A sales contract between the buyer and seller may specifically refer to this requirement. In reality, it is possible that the facility may have no economic use beyond this point unless certain specific conditions exist, including:

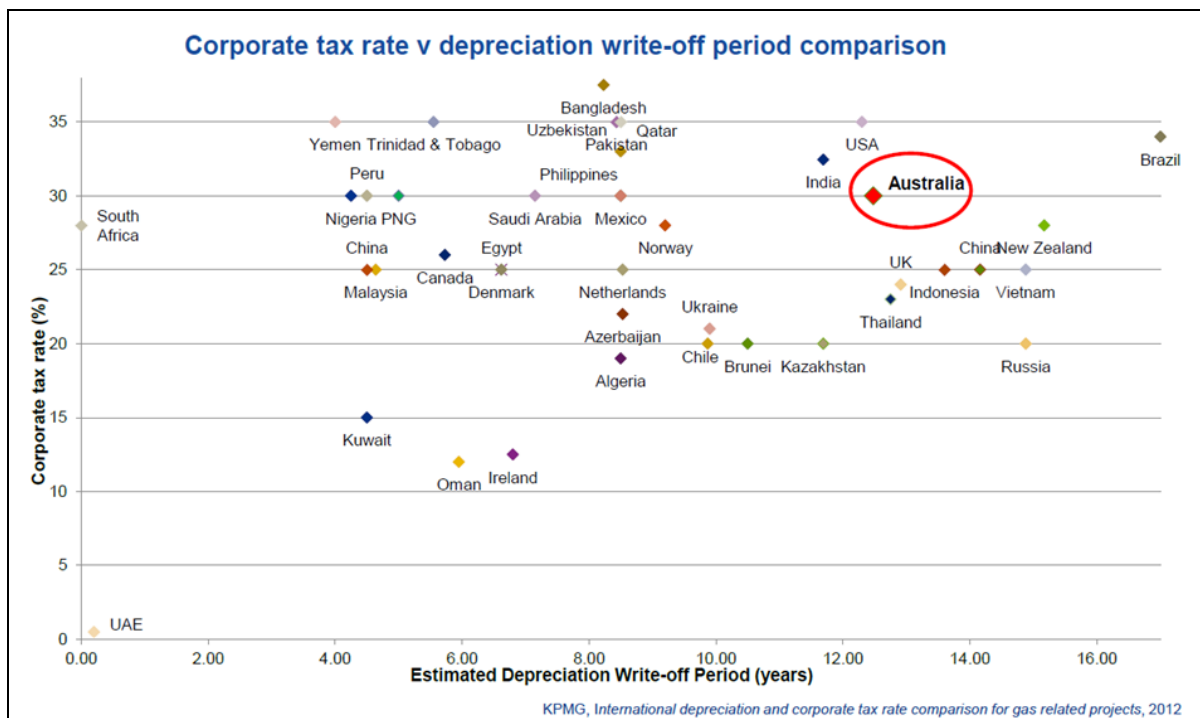
- a market exists beyond the original contract; or
- additional hydrocarbon reserves are recoverable; or
- the price for the product makes it economic to continue production.

Furthermore, government regulations may also necessitate design lives well in excess of the economic life of the project. In many offshore and onshore locations, it is necessary to engineer plant to withstand the worst of statistically possible weather extremes (for example 100 year cyclones, wave heights or floods). At remote onshore locations, the extremes of hot and cold temperatures also present significant engineering challenges.

3.4 A Comparison of Key Company Tax Terms – Depreciation/Tax Rate

APPEA first commissioned a study by KPMG in 2006 to compare two key company tax provisions for gas projects across a number of competing jurisdictions. The study was updated in 2015 and compares the company tax rates that apply in a range of energy producing exporting countries with the estimated periods over which capital can be written-off for income tax purposes. The results are highlighted in Chart 3.3.

Chart 3.3: Company Tax Rate/Depreciation Comparison – Gas Projects



Source: KPMG – 2015 APPEA Taxation & Commercial Conference

The depreciation write-off scale attempts to factor in the special incentives that have been introduced by some countries, including investment allowances or accelerated depreciation (or both) to encourage investment in gas plant and equipment. It is clear that Australian developers face a challenging framework compared to our competitors.

In drawing conclusions about Australia's relative competitive tax position with countries seeking to develop gas resources, it is important to recognise that other taxes and/or fiscal systems exist. Different resource taxation provisions and income tax parameters apply in different countries. Notwithstanding these differences, it is still illustrative to compare these key income tax parameters.

Any decision to extend the write-off provisions to periods even longer than currently apply (15/20 years) will further disadvantage Australian producers compared with those in other jurisdictions. In reality, a marginal reduction in the baseline company tax rate would only partially ameliorate the impact of more harsh depreciation terms because of the capital intensive nature of the petroleum industry. As indicated above, the negative impacts associated with the use of long write-off periods for plant and equipment are further exacerbated by the mismatch in timing between when costs are incurred and when a tax deduction can first be claimed.

In summary, the comparison shows that most current and prospective gas exporting countries that are actual or potential competitors to Australia provide lower company tax rates and allow project proponents to depreciate capital over periods of time considerably less than Australia.

3.5 The 'Tax Base/Tax Rate Trade-Off'

Discussions in the context of the tax reform process often focus on the argument that a reduction in the company tax rate would be of benefit to the business community. In isolation, this statement may be theoretically correct, however modifications to the taxation base that are introduced purely to fund a reduction in the tax rate must be viewed in a wider context.

If a reduction in the company tax rate was the sole objective, a drastic reduction could be achieved through a wide-ranging broadening of the tax base through a blanket denial of deductions. Clearly this would be a counterproductive outcome.

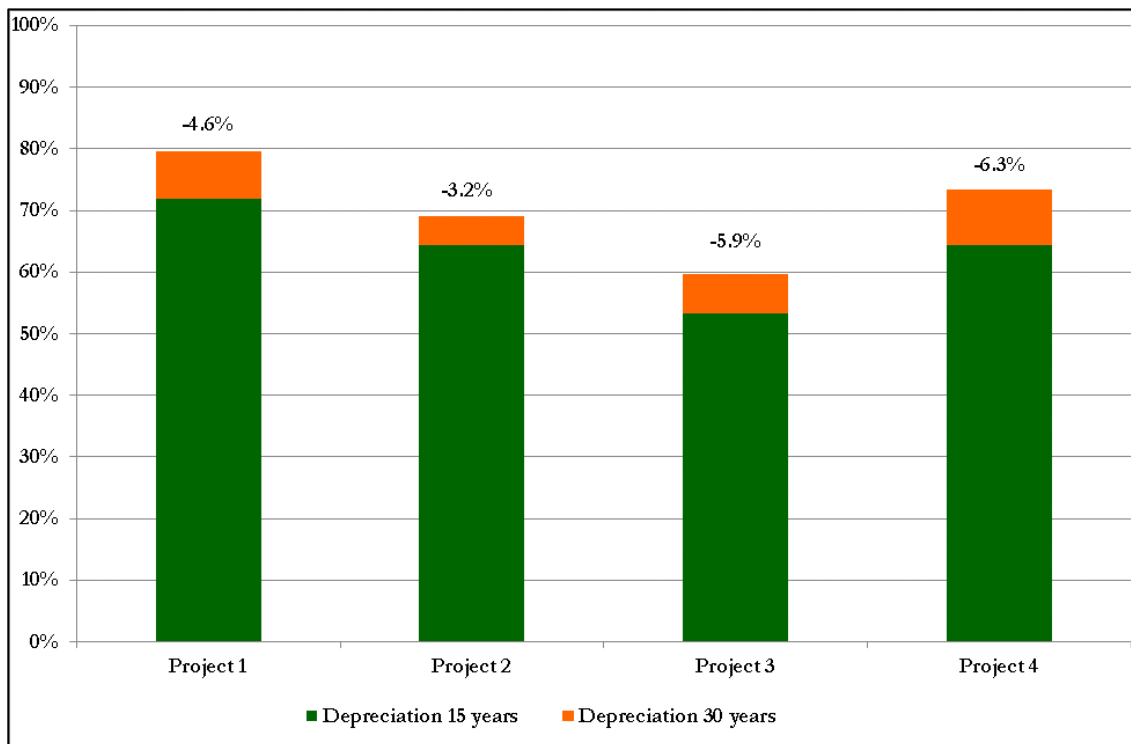
It is important to understand the potential impacts associated with offsetting changes to key income tax settings. An illustrative example is the impact associated with a change to the depreciation and tax rate provisions.

As indicated above, under Australia's current company tax rules, the average period over which much of the capital invested in gas projects may be written off is between 15 and 20 years. In the context of the 2012 Business Tax Working Group review of certain taxation measures, APPEA modelled a number of potential gas to liquids projects to demonstrate the impact of changing the existing provisions. The results of the analysis are outlined in Chart 3.4.

As can be noted, the government's share of the project return associated with each of the projects rises significantly with the movement away from the existing 15/20 year effective life caps.

For comparative purposes, it is important to understand the reduction in the company tax rate that would be necessary to compensate for the changes to the depreciation effective life provisions. Based on the 2012 data, reductions of between 3.2 and 6.3 per cent would be required in the company tax rate to offset any adverse changes to the depreciation provisions.

Chart 3.4: Estimated Government Tax Take of Total Project Cash Flows - Net Present Value (Percentage Take)



Source: APPEA

The variation in the rates reflects the different project structures, cost profiles and production streams associated with each project. In the current commodity price environment, even greater reductions in the company tax rate would be necessary to compensate against the impact of any negative changes to the existing depreciation terms.

The provisions that were introduced in 2002 were as a result of a considered and comprehensive process, including a review undertaken by a Parliamentary Committee. The measure addressed a concern about the ability of Australia to compete with other countries seeking to develop gas resources. APPEA member companies are of the view that the measure introduced in 2002 for oil and gas assets has had a direct and positive impact on investment decisions in the Australian gas industry.

Overall, any movement away from the current 15/20 year write-off periods will have an impact on future investment decisions on gas projects. It is also worthwhile noting that many gas producing jurisdictions provide a range of incentives for large scale infrastructure type projects. These incentives can range from tax holidays to reduced tax rates. Indeed, a case exists for the present lives to be further shortened to allow Australia to more effectively compete with other gas producing nations, as well as bringing forward the depreciation start time to when the expenditure is actually incurred.

3.6 Tax Treatment of Financing Costs

In most of the company tax systems that operate in both OECD economies and in emerging economies with which Australia competes, interest expense is regarded as a legitimate deductible

business cost. Business tax systems around the world, along with international accounting standards, recognise the difference between debt and equity and provide for different treatments between the payment of returns to debt holders compared with payments to equity holders.

As with Australia, most jurisdictions have rules which limit the ability of multinational corporations to use excessive levels of debt. Following recent changes to Australia's thin capitalisation rules, Australia now has strict thin capitalisation rules which prevent interest deductions for debt in excess of 60% of the value of the assets of the taxpayer. In APPEA's view, the current restrictions represent an appropriate balance between the need to protect the integrity of the tax system and the need to ensure that the tax system encourages the significant capital investment that is required to ensure the on-going growth of the Australian economy.

The growth and sheer scale of investment in the Australian gas industry has necessitated the generation of funds from different sources by both domestic and international companies. In terms of capital expenditure alone, the current wave of investment is expected to have required more than \$200 billion in funding.

OECD Review – Interest Deductibility

Interest deductions have been a key component of the work of the OECD Basis Erosion and Profit Shifting Project, and the Final Report on Action Item 4 is the result of that work. The Report recommended that interest deductions be capped at a net interest/EBITDA (earnings before interest, taxes, depreciation and amortisation) ratio within a corridor between 10% and 30%. This is in contrast to the current asset based restrictions used in the Australian thin capitalisation rules.

Importantly, however, paragraph 83 of the Final Report provides that where the economy of a particular country is highly reliant on heavily capitalised groups whose activities rely on tangible fixed assets with long depreciation periods, asset values may be used as an acceptable alternative.

For a number of reasons, EBITDA based restrictions will be difficult to apply to taxpayers in the upstream petroleum industry without causing significant distortions. Firstly, earnings are extremely volatile, meaning that EBITDA can swing vastly from one year to the next without any ability of taxpayer to accurately predict. Secondly, the investment timeframe and scale of projects (such as for the current LNG projects under construction or recently completed) means that companies can go many years during the construction phase without generating any earnings, but where interest expense is accrued.

It is difficult to see how carry forward and carry back rules proposed by the OECD could adequately deal with the scale of earnings volatility and investment timeframes which exist in upstream petroleum projects. Any moves to further restrict interest deductions available to Australian taxpayers would likely have a negative impact on the ability of new projects to achieve final investment decision status.

Board of Taxation Review – Thin Capitalisation Arm's Length Debt Test

In May 2013, the Federal Government requested that the Board of Taxation undertake a review of the arm's length debt test (ALDT) as it applies to the thin capitalisation rules. The Report commented on gearing challenges already faced by capital intensive industries in the

development of large scale projects. Rather than restricting debt deductions, it recommends greater access to the ALDT so that the viability of projects is not put at risk by failure of the safe harbour. At paragraph 3.3 of the report, it states:

“3.3 Accordingly, the ALDT often provides an allowable debt deduction for large-scale projects undertaken by capital-intensive industries such as liquefied natural gas (LNG) projects and electricity generators. These are typically funded through a ‘project financing’ arrangement (a non-recourse or limited-recourse financial structure where the entity pays back the debt used to finance the project from the cash flow the project generates).²⁹ These types of projects would generally fail the safe harbour test, which would prevent access to debt deductions and, according to submissions received, put the viability of projects at risk in many cases.

3.4 In these circumstances, and assuming that it is desirable to provide certainty and not to impose tax-driven disincentives for such projects in Australia, the ALDT provides an appropriate method for assessing whether the Australian business of a multinational entity is appropriately capitalised. One of the advantages is that the ALDT generally reflects the economic circumstances of particular industries or businesses that operate with higher gearing ratios than those allowed by the safe harbour rules.”

Footnote 28: To avoid any doubt, large-scale projects may involve the following sectors: energy (including power stations, gas pipelines, and transmission and distribution); infrastructure (including toll roads, rail and ports); transport (including airports); resources (including base metals, precious metals, oil and gas, and chemicals); telecommunications (both networks and cables); and social infrastructure (such as hospitals, prisons, sewerage treatment and water supply facilities).

Footnote 29: Project financing is typically a highly leveraged transaction; since the global financial crisis the average senior debt financing has been around 70 per cent and equity around 30 per cent.

See <http://taxboard.gov.au/consultation/thin-capitalisation-arms-length-debt-test/> for more details.

Attachment 1

Inquiry Terms of Reference

The Committee will examine some options to simplify the personal and company income tax system, with a particular focus on options to broaden the base of these taxes in order to fund reductions in marginal rates. Matters to be examined include:

- The personal tax system as it applies to individual non-business income, with particular reference to the deductibility of expenditure of individuals in earning assessable income, including but not limited to an examination of comparable jurisdictions such as the United Kingdom and New Zealand; and
- The company income tax system, with particular reference to the deductibility of interest incurred by businesses in deriving their business income.

Attachment 2

APPEA Exploration and Production Member Companies

Americian Energy Global Partners, LLC
Armour Energy Limited
Arrow Energy Limited
AWE Limited
Beach Energy Limited
Benaris International Pty Ltd
BHP Billiton Petroleum Pty Ltd
Blue Energy Limited
Bounty Oil & Gas NL
BP Developments Australia Pty Ltd
Bridgeport Energy Ltd
Buru Energy Limited
CalEnergy Resources (Australia) Ltd
Carnarvon Petroleum Ltd
Central Petroleum Limited
Chevron Australia Pty Ltd
Comet Ridge Limited
ConocoPhillips Australia Pty Ltd
Cooper Energy Ltd
Cue Energy Resources Limited
Dart Energy Ltd
Drillsearch Energy Limited
Empire Oil & Gas NL
Eneabba Gas Limited
Eni Australia Limited
ERM Gas Pty Ltd
ExxonMobil Australia
Finder Exploration Pty Ltd
Galilee Energy Limited
GDF Suez Bonaparte Pty Ltd
Hess Exploration Australia Pty Limited
Hydra Energy (WA) Pty Ltd
Icon Energy Limited
INPEX
ITOCHU Minerals & Energy of Australia Pty Ltd
Japan Australia LNG (MIMI) Pty Ltd
Japan Energy E&P Australia Pty Ltd
KUFPEC Australia Pty Ltd
Lakes Oil N.L.
Latent Petroleum Pty Ltd
MEO Australia Limited
Metgasco Limited
Mitsubishi Australia Ltd
Mitsui E&P Australia Pty Ltd
Murphy Australia Oil Pty Ltd

Nido Petroleum Limited
Norwest Energy N.L
Oilex Ltd
OMV New Zealand Limited
Origin Energy Limited
Pangaea Resources
Papuan Oil Search Limited
Petronas Australia Pty Ltd
PTTEP Australasia A Part of the PTTEP Group
QGC A BG Group Company
Quadrant Energy Pty Ltd
Roc Oil Company Limited
Santos Limited
Senex Energy Limited
Shell Australia Pty Ltd
Statoil Australia Theta B.V
Strike Energy Limited
Tap Oil Limited
Tokyo Gas Australia Pty Ltd
Tokyo Timor Sea Resources Pty Ltd
Total E&P Australia
Tri-Star Petroleum Company
Vermilion Oil & Gas Australia Pty Ltd
WestSide Corporation
Woodside Energy Limited