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Business Tax Working Group
The Treasury
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Business Tax Working Group : Discussion Paper

Please find attached a submission from the Australian Petroleum Production & Exploration Association (APPEA) in relation to the Discussion Paper released by the Business Tax Working Group.

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Yours sincerely

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Submission to the Business Tax Working Group

Discussion Paper

AUSTRALIAN PETROLEUM PRODUCTION & EXPLORATION ASSOCIATION (APPEA) LTD

September 2012

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Overview and Executive Summary

The Australian Petroleum Production & Exploration Association (APPEA) is the peak body that represents companies engaged in oil and gas exploration and production operations in Australia. APPEA's members account for approximately 98 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 to governments;
- the employment of tens of thousands of Australians; and
- the generation of vast amounts of export income.

The industry is truly global in nature, and must compete for a limited pool of international investment capital. Oil and gas funding that is lost from the domestic oil and gas industry will not be spent in other parts of the Australian economy, it will be redirected to our overseas competitors. While the industry has committed to the development of a number of large scale 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 is a key influence on the economics of projects.

APPEA and its member companies support genuine tax reform. The industry has been an active participant in numerous reviews of aspects of the fiscal system since the 1970's, and have taken a constructive and transparent position in examining reform options, including assessing the potential impact on investments in the industry.

The premise of the current approach is that a reduction in the company tax rate is of benefit to the business community. However, any modifications to the taxation base that are introduced purely to fund a reduction in the tax rate must be viewed in a wider context. The revenue neutrality condition that has been placed on the current phase of the activities of the BTWG places a fatal constraint in achieving the improvements to economic growth that can arise from genuine reform to the business tax system. The current process could see a potential redistribution of taxation without improvement to economic efficiency. Indeed, 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

APPEA is concerned that the current process has effectively become a 'form-over-substance' review of the business tax system, insomuch as the sole focus has been placed on achieving a reduction in the baseline company tax rate. This fundamentally ignores the fact that the ability of the tax system to foster long term economic prosperity is dependent on how business costs are treated, not just the tax rate that is applied to taxable income.

The focus of the Business Tax Working Group deliberations has seemingly become directed towards one that purely seeks to modify deductions to provide a cash flow stream to support a reduction in the tax rate. The treatments of many costs being reviewed by the BTWG are critical elements of broader industry policies, and in many cases, represent the appropriate mechanisms for the handling of such costs. The treatments also represent considered decisions of past governments and the Parliament to ensure that Australia is well placed to maximise its economic potential and to effectively compete on a global basis. In addition, the failure of the review to canvass other revenue options, such as changes to the goods and services tax, arguably further hampers the ability to achieve genuine and sustainable tax reform.

In terms of the specific measures outlined in the BTWG discussion paper:

- APPEA does not support any change to the **treatment of exploration expenditure.** The options fail to recognise the true nature of such costs, the uncertainties associated with exploration, the broader energy policy consequences of the proposed changes and the outcomes of a succession of past reviews that have confirmed the existing treatments.
- APPEA is opposed to any changes to the existing **capital depreciation provisions** as they apply to oil and gas assets. Indeed, the current provisions do not reflect the competitiveness challenges that already confront investments in long term oil and gas projects. Significant sums of company tax are already payable well before an investor is able to achieve a marginal return on invested funds, and the depreciation provisions in Australia do not favourably compare with those that exist in other gas producing countries.

In addition, while the BTWG discussion paper indicates that one of the key principles of any business tax reform change is that of future revenue adequacy, many of the funding measures proposed result only in timing changes as to when tax is paid. Such funding measures would not fund a permanent rise in tax revenues that would offset a long-term cut to the corporate tax rate.

Any changes that tilt the incidence of the company tax system against the capital intensive and infrastructure sectors of the Australian economy (and in favour of the services and financial sectors) will fundamentally impact on the ability of Australia to construct legacy projects and to create sustainable taxation revenue streams for future generations of Australians. Australia needs a balanced economy, not one that simply rewards industry's that provide services to other industries.

APPEA also notes that in the terms of reference for the BTWG (Item 3), under the heading 'Scope', it is prefaced with "*the Working Group will focus on reform options that relieve the taxation of new investment*". APPEA's members are of the firm view that the exploration and capital depreciation proposals will act as significant disincentives for new investment.

Further commentary on the options canvassed in the discussions paper, details of the nature of oil and gas industry operations and international competitiveness issues are outlined in more detail in this submission.

"*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

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

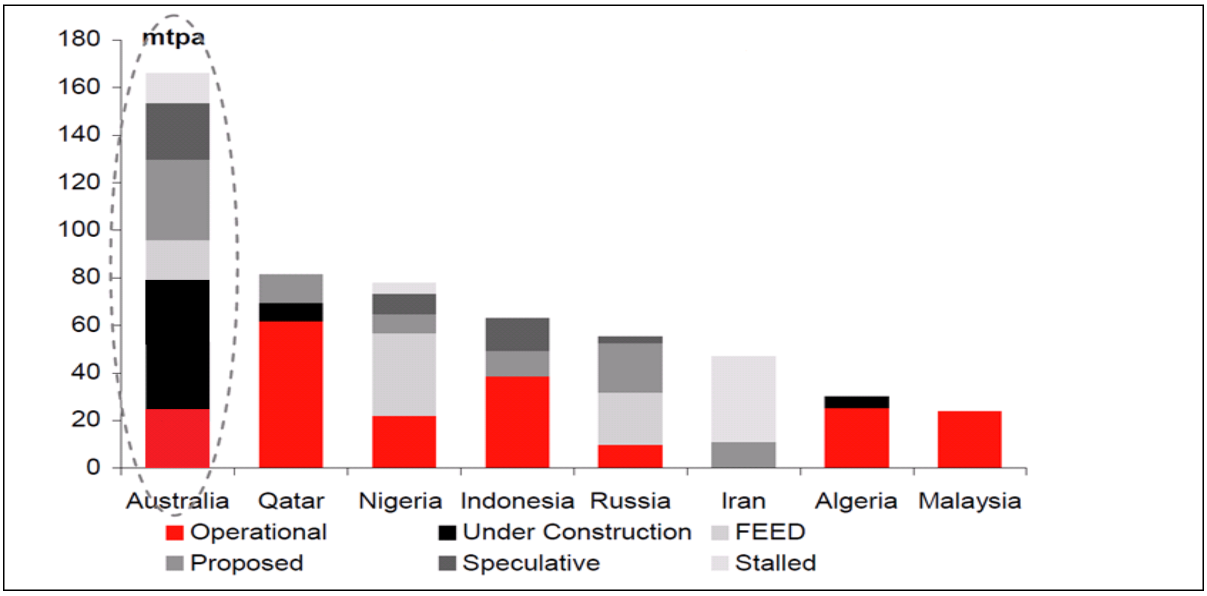
"The possible gains from the business tax reforms being considered will depend on the nature of the changes made to these business taxes and the offsetting changes to other business taxes to ensure revenue neutrality. That is, gains from reforming these business taxes need to be weighed up against the effects of the offsetting changes. For example, the net effect on economic efficiency will depend on the changes in the deadweight loss arising from each tax change. The net effects of such changes are likely to be relatively modest, unless the changes have a material effect on the production and investment decisions of businesses" Productivity Commission, June 2012

1.1. Introduction

Since the late 1960's, oil and gas exploration and production has been playing an increasingly significant role in the Australian economy. From the discovery of gas in central Australia to the vast oil and gas fields in Bass Strait and in the north-west region of Australia, the industry has been pivotal in the supply of energy to Australia and to many of our key trading partners.

The growth of the industry has provided many benefits to Australia, including:
- the supply of reliable and competitively priced energy;
- investment of hundreds of billions of dollars in exploration and development activities;
- employment (both directly and indirectly) of hundreds of thousands of Australians;
- payment of hundreds of billions of dollars in taxes and charges to governments; and
- generation of vast sums of export income and the replacement of costly imports of petroleum.

Chart 1.1: Existing, Committed and Proposed LNG Production



Source: Company Data, Macquarie Research

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 fiscal settings. The fiscal settings have assisted investors commit the vast sums of risk capital necessary to both find and develop the resource base. Importantly, they have generally provided a stable base that has provided investors with confidence and of more recent times, the settings have responded to the competition challenges from other countries and the commercial complexities that confront companies wishing to develop the nation's gas resources.

While investments in the industry have been significant to date, future development decisions will be dependent on a fiscal regime that balances risk with reward. To capture the opportunities that are highlighted in Chart 1.1, it is critical that the company tax regime remains structured in a manner that facilitates positive investment decisions. A number of the proposals canvassed in the Business Tax Working Group discussion paper, if implemented, would have the potential to stall this growth opportunity.

Also of concern has been the gradual decline in recent years in the exploration efforts of the industry – today's exploration is the production for future generations of Australians. While many factors influence exploration decisions, ensuring that income tax measures are used as an effective tool in achieving comprehensive energy policy outcomes will remain a key to our future successes. In this context, the current debate surrounding business tax reform must be viewed in the context of a wide policy perspective – income tax policy is in many respects merely a tool in terms of its interaction with broader industry, energy and economic policies.

1.2 The National Economic Contribution of the Industry

The continuation of Australia's resources boom cannot be taken for granted. There are a raft of policy areas in which complacency may threaten both Australia's attractiveness as a place to do business and the hundreds of billions of dollars' in oil and gas industry investment still to be approved. Australia's oil and gas industry is embarking on a sequence of new investments, the largest in our history:

- seven of the 13 gas liquefaction plants under construction or firmly committed world-wide are in Australia; and
- increased production capacity has the potential to propel Australia towards being the world's second largest LNG exporter, potentially challenging Qatar for the top position.

This expansion is underpinned by Australia's position at the cusp of a major shift in the world's economic weight from west to east. World economic growth has been driven by the rapid industrialisation of China and other structurally large Asian economies. This has changed the dynamics of key international resource, product and capital markets.

For Australia, this has translated into strong demand for our energy and mineral resources, and is driving massive investment by the oil and gas industry. The economic advance of our region is overwhelmingly positive for Australia. It plays to our comparative advantages as a secure and reliable energy exporter and our proximity to markets. However, the continuing development of Australia's oil and gas industry should not be taken for granted as we are becoming a high cost investment destination relative to other oil and gas producing countries. Developing our world class energy resources will help underpin future prosperity through continued investment in discovered and undiscovered petroleum resources.

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

A 'Snapshot' of the Economic Contribution of Australia's Oil and Gas Operations

The analysis covers the economic contribution of the direct impact of the oil and gas operations and the flow-on contribution of the 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 added. 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 regional, interstate and international dimensions.

While the current economic contribution is substantial, the future contribution is expected to be much more significant. The unprecedented committed expansion is forecast to increase output by $68 billion in 2020 and $63 billion in 2025. Existing developments are set to decrease output value from $29.7 billion in 2011 to $22 billion in 2025 as reserves deplete and production slows. 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.

Table 1.1: Forward Economic Contributions

	NPV	2011	2020	2025
Oil and gas				
Value added ($b)	420.0	28.3	64.7	60.1
Direct value added ($b)	356.7	24.1	55.0	51.5
Indirect value added ($b)	63.3	4.3	9.8	9.1
Direct value added, share of GDP (%)		1.7	2.9	2.3
Total value added, share of GDP (%)		2.0	3.5	2.7
Exploration				
Value added ($b)	9.1	1.1	0.8	1.1
Total				
Value added ($b)	429.1	29.4	65.5	61.2
Share of GDP (%)		2.1	3.5	2.8

Source: Deloitte Access Economics

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. These projections should be considered indicative given the volatility of commodity prices and cost structures for individual projects. 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 investment and production decisions.

Table 1.2: Oil and Gas Tax Payments, Selected Years and NPV (7% discount rate)

Contribution ($ billion)	NPV* (2012-2025)	2011	2020	2025
Corporate	61.2	4.4	9.1	8.5
Production taxes	32.4	3.5	3.7	3.6
Total	93.6	7.9	12.8	12.1

*Note: * The NPV incorporates a discount rate 7%*
Source: Deloitte Access Economics

It is anticipated that the proposed projects will spend on average $23 billion in capital outlays per year over the period 2009 to 2017, or about $210 billion in total (this excludes on-going operational expenditures). This increases oil and gas output by $46 billion in 2020 and $41billion in 2025.

As a result of the capital expenditure and operational activity generated by these oil and gas projects, Australia's GDP is expected to increase significantly. Over the capital expenditure intensive phase – GDP peaks at 2.2% in 2016. Around 2017, the bulk of activity in the sector switches from the capital-intensive phase to a ramp-up in oil and gas output. Over the period to 2025, GDP is expected to increase by just over $260 billion in NPV terms. Employment peaks at 103,000 FTE's in 2012 over the investment phase, moderating to 11,500 in 2025 in the less labour intensive operation phase.

Table 1.3: Modelled GDP/GSP and Employment Impacts (Selected Years and NPV)

GDP/ GSP ($b)	NPV* (2011 – 2025)	2012	2015	2025
NSW	-6.7	0.6	-0.343	-1.7
Vic	8.0	0.5	0.493	1.4
Qld	91.9	6.1	9.7	14.8
SA	0.5	0.035	0.056	0.052
WA	135.4	11.6	20.5	19.1
Tas	-0.360	0.004	-0.022	-0.107
NT	32.7	2.0	3.9	4.3
Australia	261.4	21.0	34.3	37.9
Employment ('000 of FTE)		2012	2015	2025
NSW		7.4	-1.0	-2.6
Vic		2.2	-1.2	0.0
Qld		38.7	16.8	5.5
SA		0.6	0.4	-0.4
WA		44.7	54.0	5.5
Tas		0.1	-0.2	-0.2
NT		9.4	8.8	3.7
Australia		103.1	77.8	11.5

*Note: * The NPV incorporates a discount rate 7%*
Source: Deloitte Access Economics

This activity is largely concentrated in an increase in GDP in the resource-rich Western Australia, Queensland and Northern Territory economies. Western Australia on its own provides for just over half of the GDP gains with $135 billion in present value terms. Employment unsurprisingly follows the output distribution and is concentrated in the oil and gas rich states.

Over many decades Australia's oil and gas industry has played a substantial role in unlocking Australia's abundant energy resources and reinforcing our international reputation as a world class energy exporter. Looking forward, the industry is well-placed to take advantage of the considerable opportunities presented by strong demand for energy resources within our region.

This is being underpinned by a remarkable level of investment in new production facilities across the country, predominantly in oil and gas rich states. The scale of these investments is quite unprecedented and it showcases the industry's enterprise and capabilities to concurrently execute complex and long term projects.

If industry investment and the boost in production slated to come on line over the next decade is successfully executed, it will provide enormous economic benefits to the country. To harness these potential gains, there will need to be further adjustment in the allocation of resources within the economy and a tax reform agenda that does not adversely impact production or investment decision making.

Further details on the DAE study can be accessed at www.appea.com.au.

1.3 The Coal Seam Gas Sector in Queensland – An Economic Case Study

To demonstrate the economic significance of the growing coal seam gas sector in Queensland, a comprehensive study was undertaken by ACIL Tasman in 2012 that examined the industry under a range of growth scenarios. The study is particularly relevant as it demonstrates the contribution that an industry can make, particularly where that industry has been the focus of targeted measures under the income tax system to address both competitiveness issues and to encourage growth.

ACIL Tasman examined three different scenarios:
- Base Case – six LNG trains with production of 24 million tonnes per year of LNG with domestic supply capacity
- 8-train Expansion Case – eight LNG trains with production of 32 million tonnes per year of LNG with domestic supply capacity
- 10-train Expansion Case – ten LNG trains with production of 40 million tonnes per year of LNG with domestic supply capacity

Selected key results of the study are outlined in Table 1.4.

Table 1.4: Key Economic Performance Measures – Queensland Coal Seam Gas

	GSP/GDP Change to 2035 $ billion (nominal)	Employment FTE Jobs	Queensland Royalties $ billion (nominal)	Federal Government Taxes $ billion (nominal)
Queensland				
▪ Base Case	363	14,242	21.6	na
▪ 8-Train Case	427	17,125	26.7	na
▪ 10-Train Case	497	20,210	32.0	na
Australia				
▪ Base Case	368	14,031	na	162
▪ 8-Train Case	450	17,016	na	228
▪ 10-Train Case	515	19,420	na	275

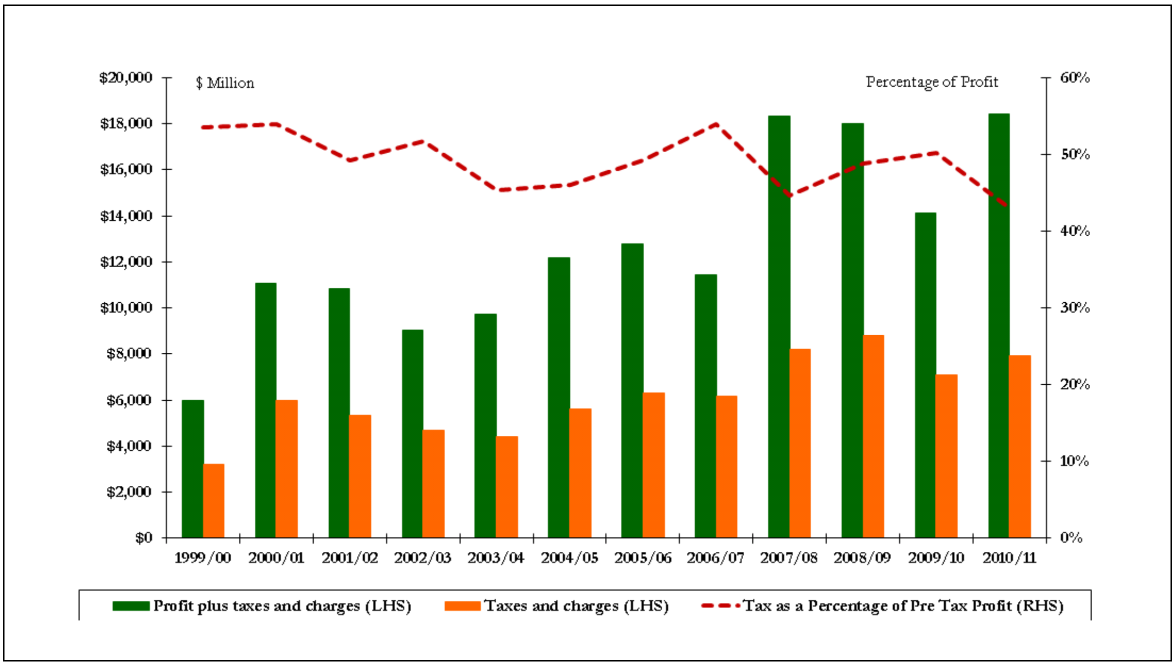
Source: ACIL Tasman, June 2012

Further details can be accessed at www.appea.com.au. The results demonstrate the potential benefits that flow from a growing energy resources sector.

1.4 The Industry in a Fiscal Context

The industry in Australia is confronted with a vast array of taxes, charges and fees in relation to petroleum activities. 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 ranging from import duties to state based transfer fees. 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.

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

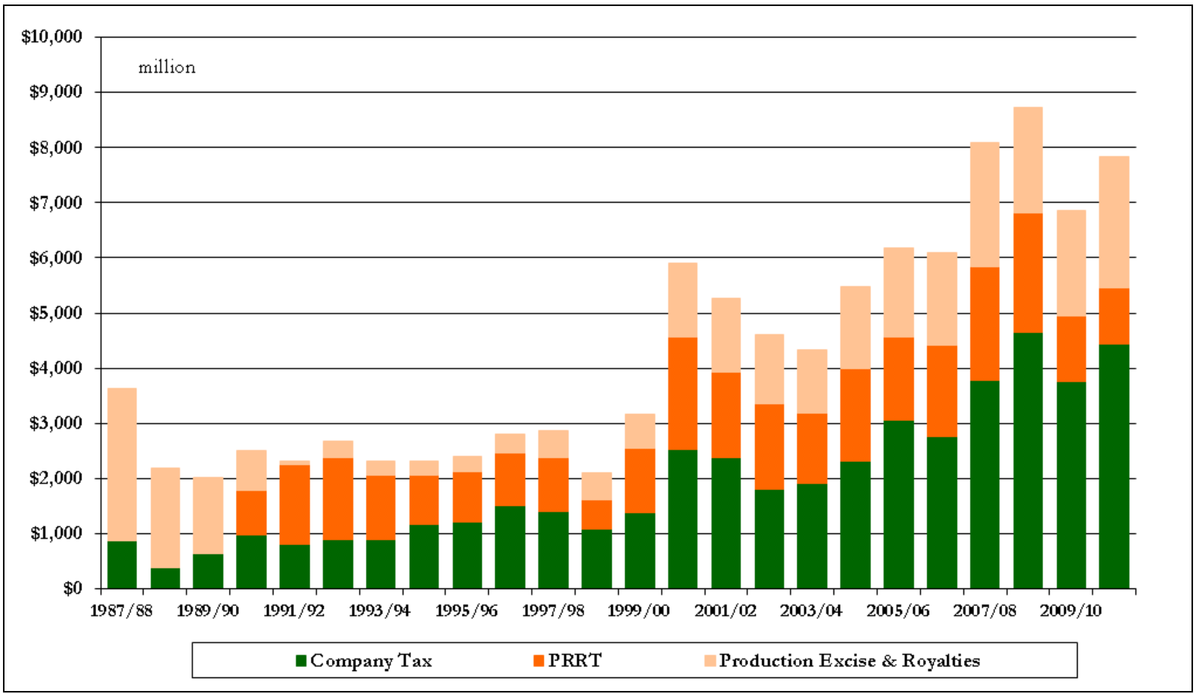


Source: APPEA Financial Survey

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.

From a resource taxation perspective, in July 2010, the Government announced that modified fiscal terms would apply to petroleum production sourced from areas not then subject to the petroleum resource rent tax. This covered all onshore areas in Australia and the North West Shelf project. In addition to the existing royalty and production excise regimes, the PRRT was extended to cover production not then subject to PRRT, with effect from 1 July 2012. A range of transitional, technical and administrative details remain the subject of discussion between the industry, the Australian Taxation Office and policy agencies. At this early stage, it is clear that the new arrangements are imposing a significant additional layer of administrative complexity on companies, as well as potentially complicating future investment decisions.

Chart 1.3: Company Tax and Resource Taxation Payments



Source: APPEA Financial Survey

SECTION 2: PETROLEUM EXPLORATION

> *"The new exploration permits raise the potential to discover new oil and gas reserves, which will underpin new projects, provide more jobs and support the Australian economy"* The Minister for Resources and Energy, The Hon Martin Ferguson AM MP, 13 September 2012

2.1 What is Exploration?

Prior to any consideration of production, companies have to first search for and find the 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 resources are ordinarily invested in appraisal and feasibility activities to determine if the field can be commercially exploited.

Searching for petroleum typically includes the following activities (some of which will be undertaken prior to obtaining an interest in a permit or licence):

- A regional geological assessment of an area in order to determine its hydrocarbon bearing potential and to determine if there are areas that are prospective and over which exploration permits should be acquired.
- Competitive bidding on areas. Generally the government will release exploration blocks and companies will bid an indicative 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:
  - Geological surface mapping (onshore);
  - Geological 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 (usually as recognisance tools);
  - 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. More often than not exploration wells are not successful. The drilling results are then fed back into the search process and the process repeated.

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. It is often said that the day you know exactly how much will be produced from a particular field is the day you stop producing from it. 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.

Appraisal activities are usually focused around the area of the discovery (or nearby if it is hoped that additional fields may be located that might become part of a potential development) and involve:

- The acquisition of additional seismic data;

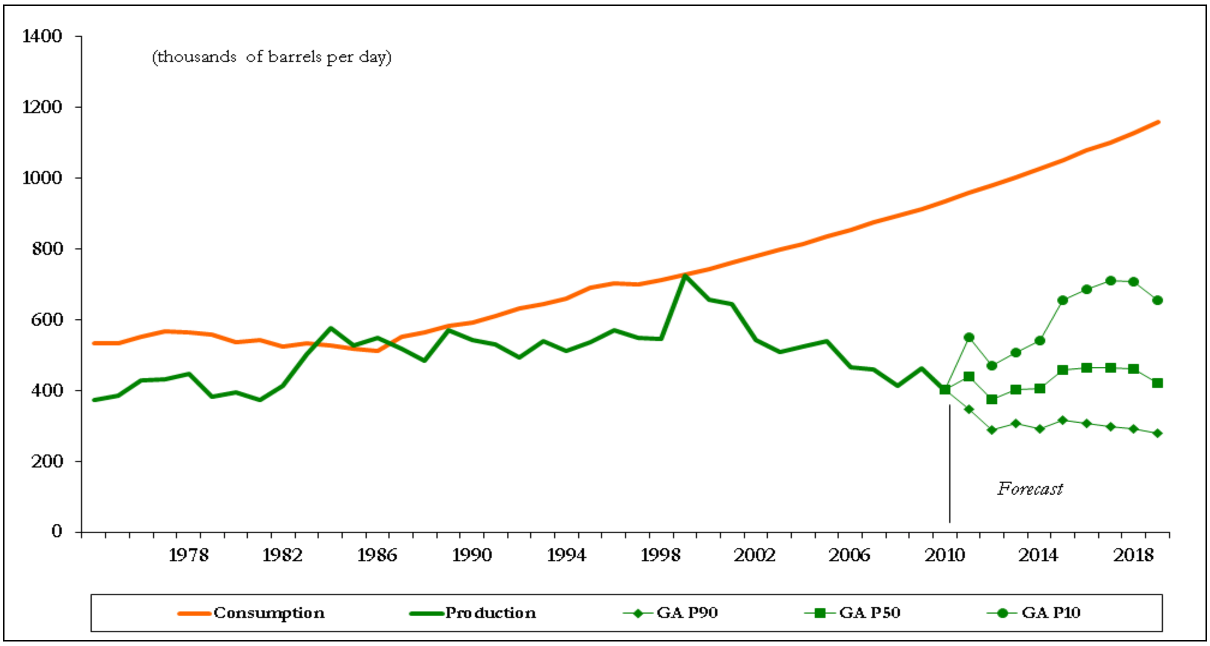
- Usually a lot more drilling to determine the geographic extent of the field, the ability of the field to produce and how uniform the properties of the field are (how the field varies from one end to the other);
- Often appraisal wells are flowed in order to confirm the fields productivity;
- Numerous studies aimed at filling in the gaps between the drilling locations.

It is only once the parties have some confidence in the possible size of the resource that the process for determining potential development options and evaluating commercial viability of the resource can commence through feasibility studies. The results of the feasibility studies will determine whether the resource is commercially viable and as such whether to proceed with the proposed project.

2.2 Petroleum Exploration and Production in Australia

The long-term health of Australia's oil and gas 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. The trend in Australia's production of liquid petroleum (crude oil, condensate and LPG) is steadily downwards from a peak in 1999, resulting in a growing gap between Australia's liquids production and its consumption of petroleum products (see Chart 2.1).

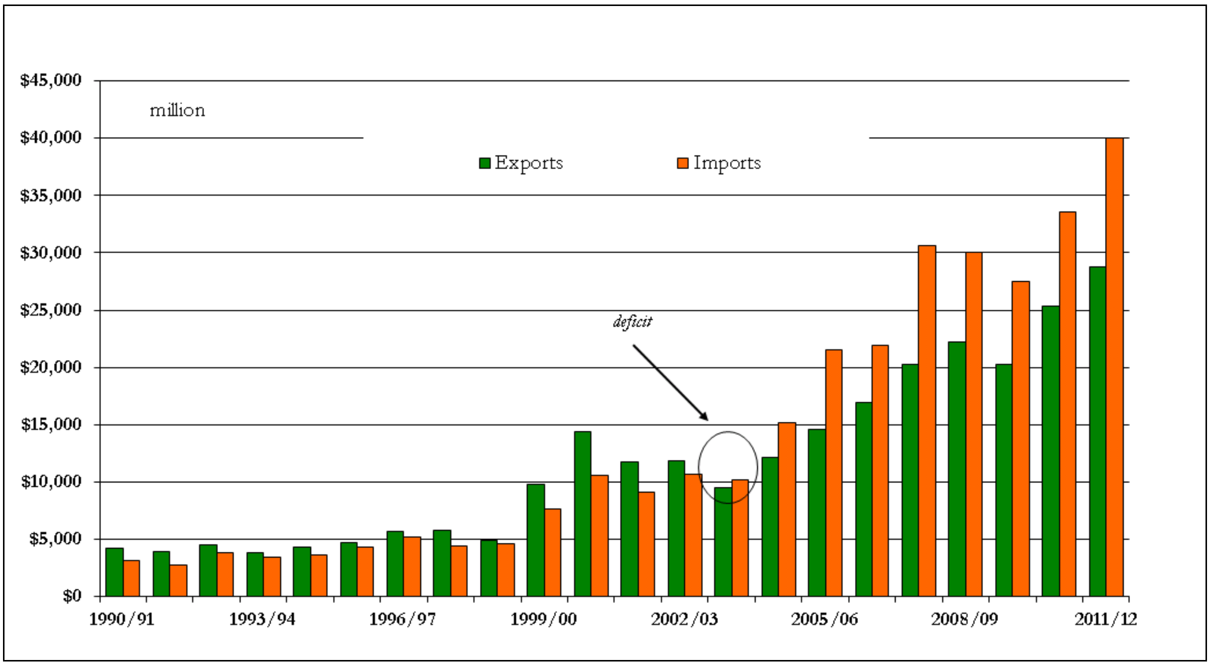
Chart 2.1: Crude Oil and Condensate Production and Consumption



Source: APPEA, Geoscience Australia, BREE

At the same time, our net oil liquids import bill is growing. This has led to a growing imbalance in the overall trade position for petroleum and petroleum products. Chart 2.1 highlights historical crude oil and condensate production, Geoscience Australia's production forecasts for crude oil and condensate, together with the forecast level of consumption (demand). The Geoscience Australia forecasts are based on high (P90 - 90 per cent level of success), medium (P50 – 50 per cent level of success) and low probability cases (P10 – 10 per cent level of success). Even assuming the most optimistic scenario (P10), petroleum liquids production is still expected to fall well short of domestic demand.

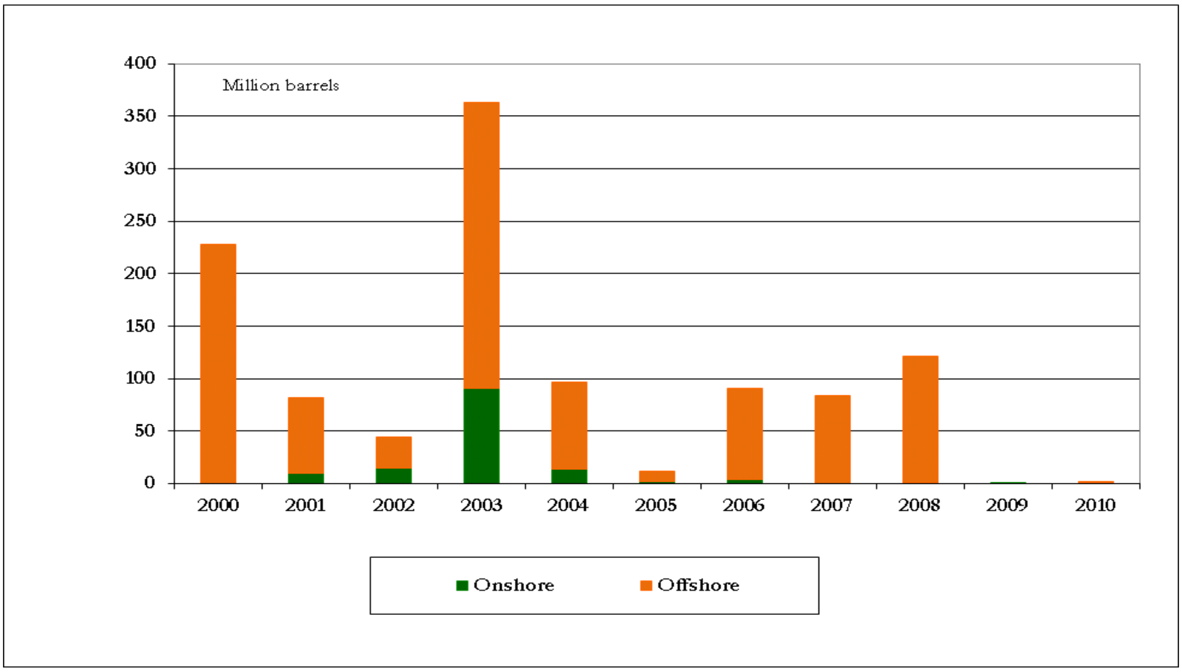
Chart 2.2: Trade in Petroleum and Petroleum Products



Source: BREE

Oil discoveries and exploration are trending downwards

Chart 2.3: Discoveries of Liquid Petroleum – 2000 to 2010

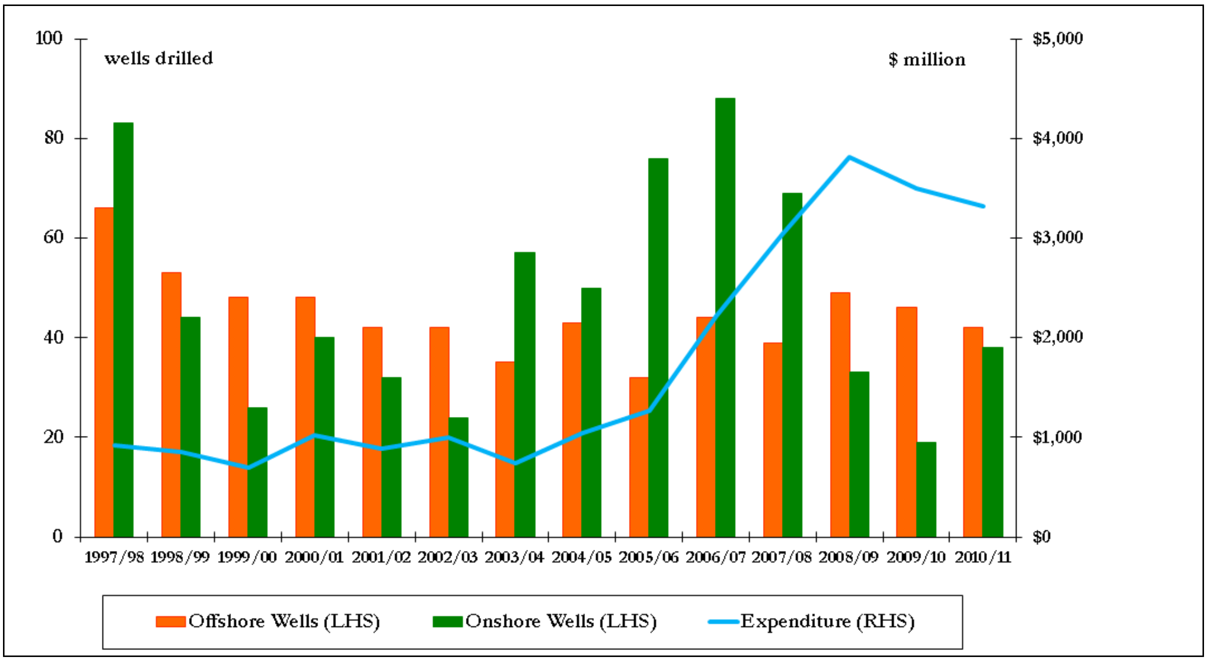


Source: Geoscience Australia

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. Unless there is a major shift in exploration activity resulting in a sequence of new discoveries, the annual loss of income to the nation will keep increasing.

There are a number of indicators that can be used to measure exploration activity. Chart 2.4 highlights the trends in exploration drilling activity in onshore and offshore areas in the period covering 1997-98 to 2010-11, together with total exploration expenditure. While the value of expenditure is the most often cited measure of exploration activity, it is often a poor guide in terms of the actual quantum undertaken, because it measures cost, not activity. The level of physical activity undertaken is a far more appropriate guide.

Chart 2.4: Petroleum Exploration Wells Drilled and Exploration Expenditure



Source: ABS, Geoscience Australia

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.

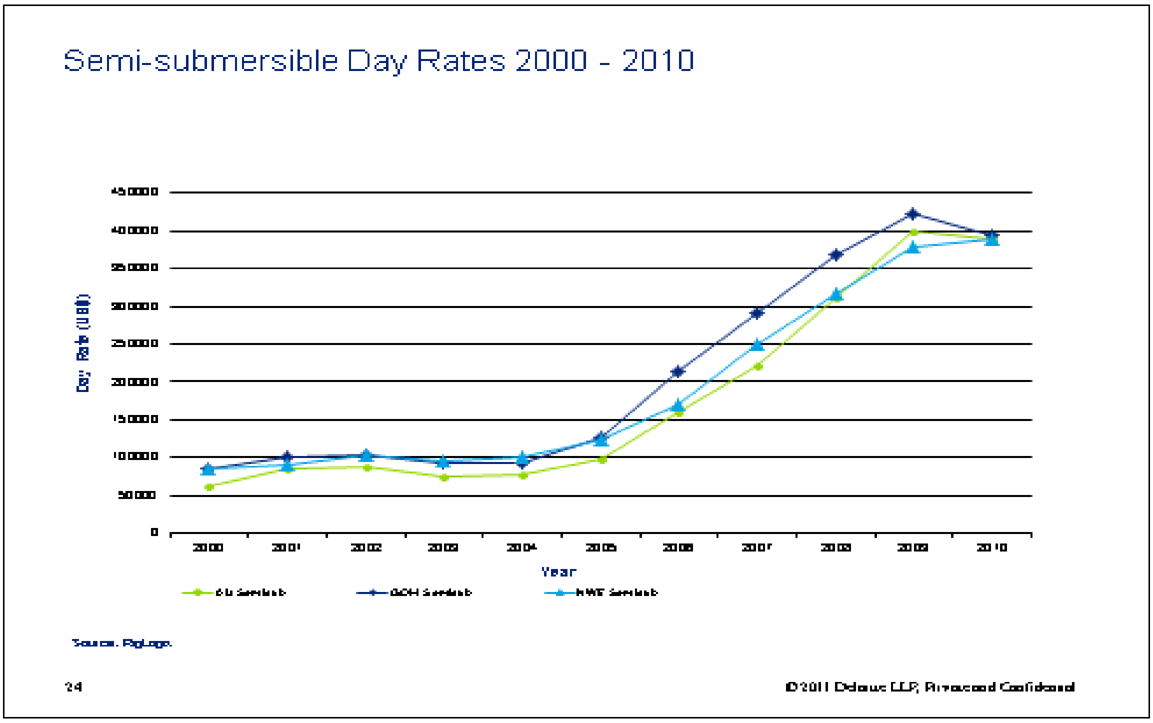
Although exploration in proven-prospective or 'discovered' areas should continue to add some new reserves, a game-changing supply outcome for the nation would require discovery of a new province or basin or identification of a previously overlooked system in a currently producing basin. But exploration 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 core reasons are likely to centre on perceptions of low prospectivity and competitiveness for development in areas remote from supplies and services and remote from markets—especially for any gas discovery.

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, taking into account the prevailing view of prospectivity.

The discovery of significant new accumulations will to a large extent be dependent on exploration in new largely unexplored basins (both onshore and offshore), where the risk/reward balance is fundamentally different. A move into more challenging geological areas may require technical innovation to support the commercial viability and sustainability of developing a resources in new areas. This trend will add a further layer of complexity and risk to future exploration. It is important that the fiscal system does not act to discourage exploration in these areas.

The increased costs associated with undertaking petroleum exploration activity are almost exclusively attributable to increases in drilling rig rates. Chart 2.5 highlights the movement in the cost of day rates for a commonly used type of exploration equipment. As can be noted, rates dramatically rose in the period from the mid 2000's to the end of the period.

Chart 2.5: Semi-Submersible Drilling Costs ($US per day)



Source: Deloitte

2.3 The Value of Exploration to the Australian Economy

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 markets. 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..

Exploration provides greater certainty about Australia's available petroleum reserves. This creates option value for industry and the wider community and economy. It creates options in the form of expanded identification of high prospect petroleum targets, better information on where, whether and when to proceed to production drilling, and ultimately project implementation, from the expanded set of prospects. These options have value from the time they are established.

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. Exploration might be justified by concerns for the adequacy of the known reserves or by concerns with the costs of tapping them – with exploration possibly leading to more economic alternatives.

Australia is currently rich in identified gas resources, however its position in the case of crude oil and condensate is somewhat different. 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. Australia is now a net importer of crude oil and oil products, with the imported share continuing to trend upwards. Major uncertainties around indigenous oil supply include the success of efforts exploring frontier basins, a costly and risky endeavour, and whether these efforts are commercialised.

While exploration can be considered as a means to an end, it should also be recognised that exploration creates economic activity in its own right. ABS data shows that the exploration and other mining support services subdivision employed 37,000 people in 2008-09 and had capital expenditure of $4,324 million. In that year the industry's value added, which is the building block of gross domestic product, was $4,646 million. To achieve this outcome the industry incurred over $16,000 million of expenses. A significant proportion of these expenses will have been incurred in Australia and will have generated flow on effects throughout the economy.

A large percentage of the expenditure on petroleum exploration comes from overseas companies. Australia competes with other countries for these exploration expenditures that can have beneficial effects for the economy ahead of successful commercialisation – and even for exploration investments that do not lead to the identification of commercial reserves.

The rationale for the exploration lies with the improved prospects for commercial projects, but these immediate benefits, involving funding that to a substantial extent would be spent in other countries if not in Australia, are significant in their own right.

Over the last three decades Australia has experienced relatively volatile expenditure by industry on petroleum exploration. In real and nominal terms, annual expenditures on petroleum exploration peaked in the 2008-09 financial year. In that year the ABS estimates that the exploration sector invested just over $3,810 million in petroleum exploration. However, expenditures declined in the following year. Over the majority of the three decades reviewed exploration expenditures ranged between $800 million and $1,500 million (2010 dollars).

The value of production of oil and natural gas to the economy is very large, rising from $20 billion to $30 billion per annum over the past decade. This increase has occurred despite crude oil production decreasing over the same period. In part, the increase in value is a reflection of the increasing price of crude oil on global markets over the same timeframe. It is also due to the increase in natural gas production, most of which is exported to Asia.

In comparison with other locations, Australia is relatively lightly explored. This is due in part to the large area of the continent, its relatively small population, the cost of offshore exploration and the recent improvements in deep water exploration and development capability, albeit at significant cost.

In 2004, Geoscience Australia forecast crude and condensate production from identified reserves, and crude oil production from potential accumulations in Australia's major sedimentary basins, for the period 2005 to 2025. Geoscience Australia concluded that Australia's future production of crude and condensate from known sources would decline over time to low levels, and that there is significant reliance on future exploration in order to retain some reasonable level of domestic production and hence reduce Australia's dependence on imports. Since this data was developed, there has been unprecedented growth in the number of proposed LNG projects in Australia.

The impacts of ceasing exploration were analysed for the period of 2003-04 to 2024-25 by ACIL Tasman. 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 development to 2025. Undoubtedly there will be some commercial developments discovered and developed in Australia before 2025; however, the actual quantum of development is more difficult to estimate than with oil.

Table 2.1 - Overview of Exploration Model Results – Loss of Exploration

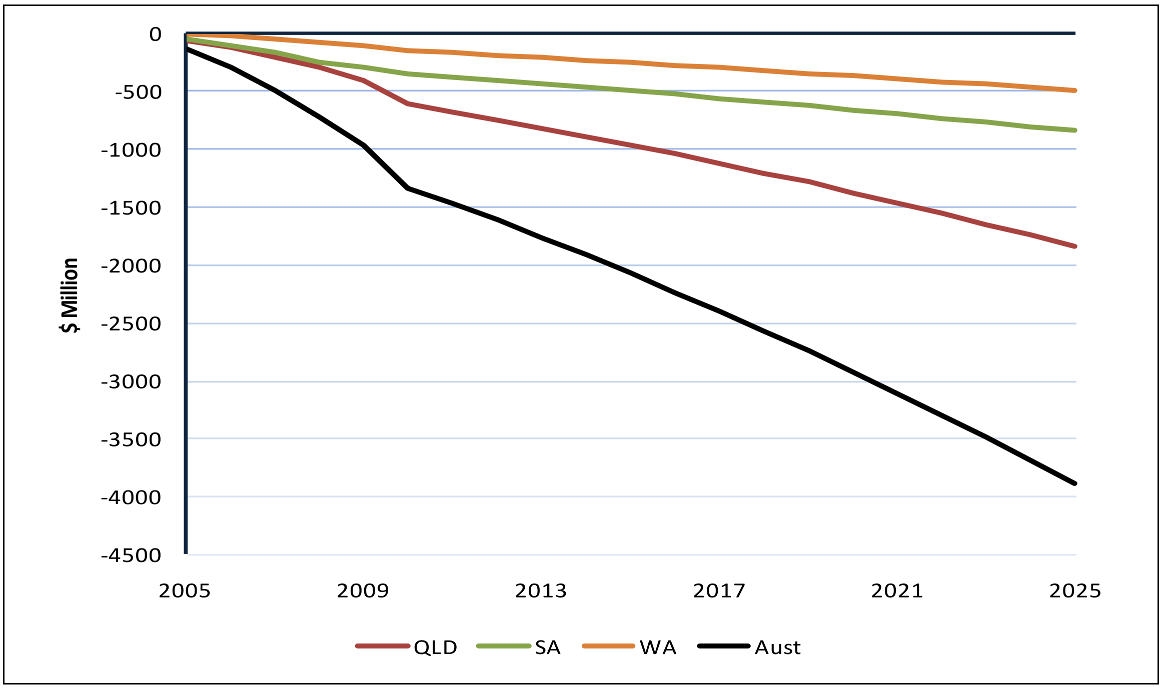
	Real GNP (2004 $ million)			Real GDP (2004 $ million)			Real Private Consumption (2004 $ million)			Employment at 2025 (number workers)
	4 % NPV	7% NPV	10% NPV	4 % NPV	7% NPV	10% NPV	4 % NPV	7% NPV	10% NPV	
QLD	-1132	-885	-713	-1274	-979	-777	-552	-430	-346	-121
SA	-538	-430	-355	-610	-486	-400	-329	-263	-218	-43
WA	-502	-404	-333	-332	-253	-199	-125	-106	-91	-88
Aust	-2581	-2031	-1648	-2712	-2101	-1681	-1432	-1131	-920	-362

ACIL Tasman (2010)

The outcomes of the loss of the oil and gas exploration industry are stark, resulting in reductions (at the 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. There is a smaller impact on WA than there is on Queensland, despite the former accounting for some 70 per cent of exploration expenditure in Australia. The reason for this is that most of WA's exploration is offshore, whilst most of Queensland's (and South Australia's) is onshore. A higher proportion of costs in offshore exploration are rig costs compared to onshore exploration.

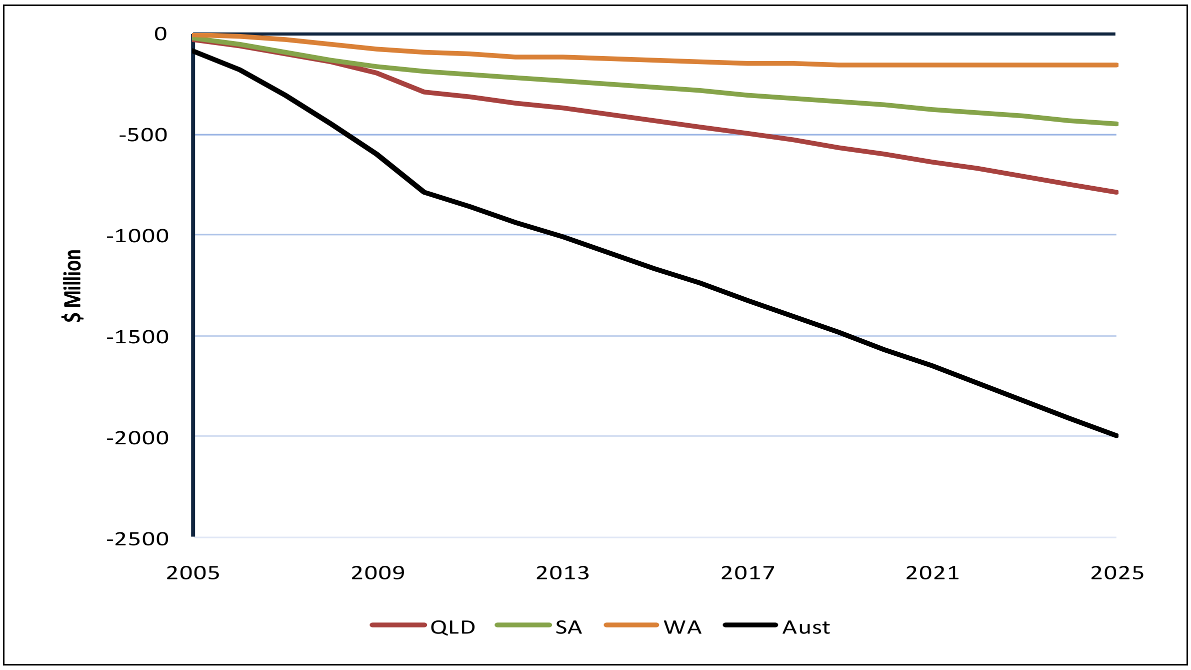
Chart 2.6 illustrates the changes in GDP on a cumulative basis, and Chart 2.7 illustrates those changes for private consumption. The figures show the impacts on the Australian economy as a whole, and individually on WA, Queensland and South Australia.

Chart 2.6: Loss of Exploration - Cumulative GDP Impact



Source: ACIL Tasman (2010)

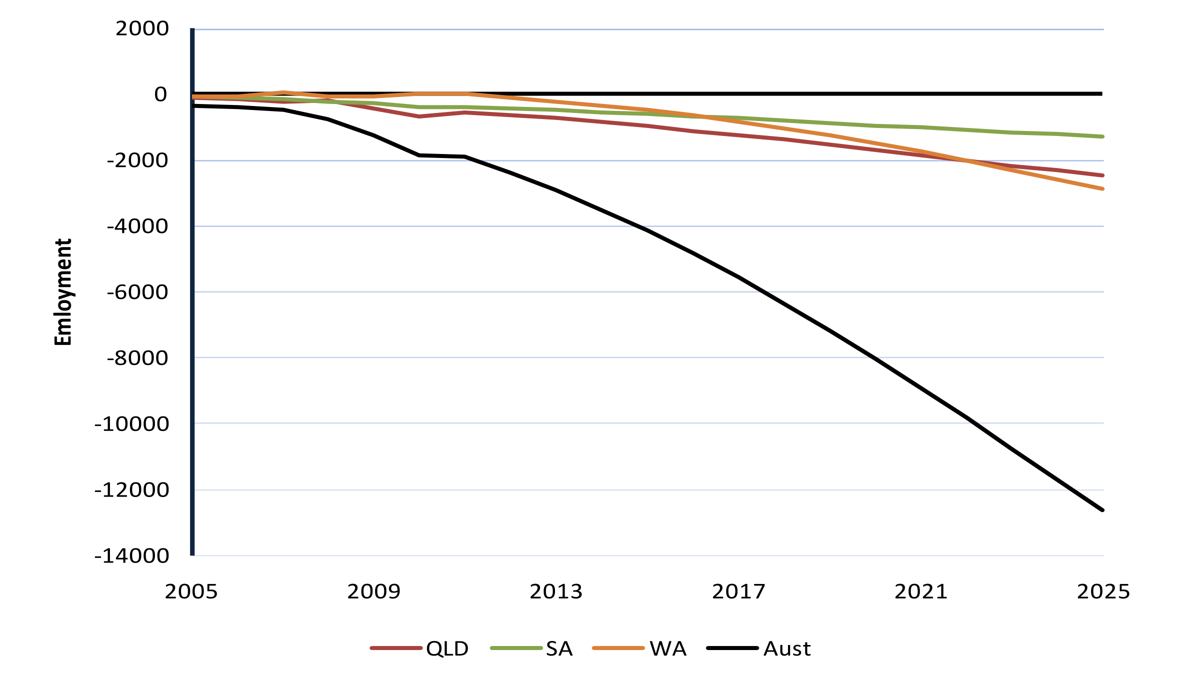
Chart 2.7: Loss of Exploration - Cumulative Private Consumption Impact



Source: ACIL Tasman (2010)

The results through time are broadly reflective of the NPV results summarised in Table 2.1 above. Chart 2.8 illustrates the decline in national and state employment over the study period. The losses are relatively evenly distributed. It is also noteworthy that the losses appear to accelerate as the study progresses, as local production continues to fall and import reliance grows.

Chart 2.8: Loss of Exploration - Employment Impacts



Source: ACIL Tasman (2010)

A summary of the estimated fall in petroleum liquids and gas reserves through caused through a cessation of exploration is provided at Attachment 2.

2.4 Australia's Relative Competitive Position

The oil and gas industry 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 Australia already has many large undeveloped gas fields, and new gas discoveries are often remote from markets and are becoming increasingly difficult to commercialise.

Low Discoveries Rates

It is important to understand that 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. A detailed summary of the data that is disaggregated by basins is at Attachment 3. Some of the key highlights are as follows:

- 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 well 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.

This data highlights some very 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 as will be discussed in a later section, many decades can pass before a company is aware as to whether a discovery can ultimately be converted into production.

Australia has a Poor Relative Ranking in Terms of Exploration Success

In the past, Australia has arguably offered a reasonably attractive petroleum investment environment and developed a reputation as being a sound place to do business. Low sovereign risk, transparent legal and regulatory processes, a stable political and economic environment, competitive markets and solid investment in pre-competitive geoscience research have been viewed as advantages, encouraging companies to direct a part of their activity and investment to Australia. Of more recent times, the perception of Australia as a place to invest has changed.

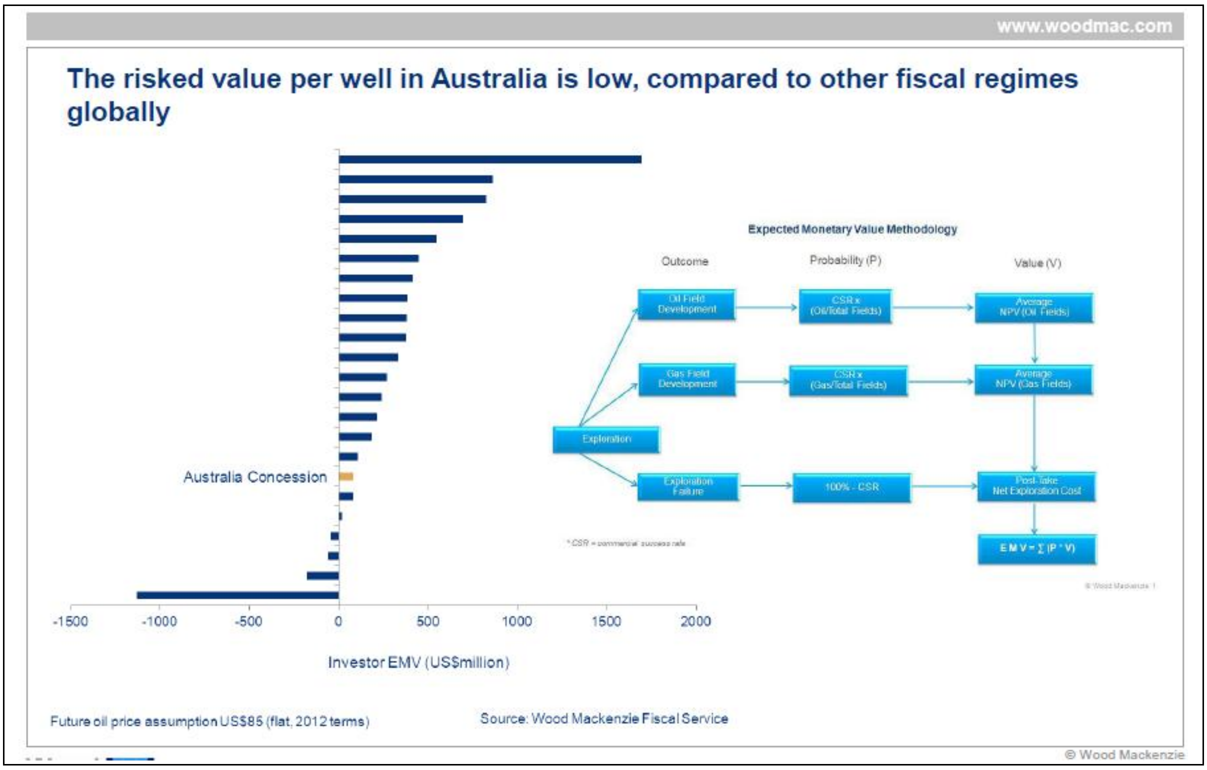
The results of the most recent Fraser Institute survey for the petroleum industry indicate that nearly a half of the respondents consider that the overall taxation regime across the various jurisdictions in Australia is either a mild deterrent to investment, or worse, discourages investment (Global Petroleum Survey, Fraser Institute 2012 (p112-113)). While the general fiscal terms (the resource taxation settings) are not seen as discouraging investment, this situation can also change very quickly.

The underlying cause for the broader change in stakeholder perceptions that is evident across a series of survey results over a number of years cannot be isolated to single reason, however a combination of regulatory complexity, delays in approvals and a willingness on the part of governments to change the underlying taxation terms that apply to the sector (often after an investment decision has been made) all have played an important role.

In the context of competitiveness, most companies will seek to have a spread of investments across a portfolio of interests, with Australia fitting into the spectrum. While Australia has historically had a perceived lower risk profile, this has also been accompanied by generally lower returns.

International petroleum consulting firm Wood Mackenzie undertakes a global analysis of returns for a range of jurisdictions. On the basis of discovery success rates, average discovered field sizes, development costs and overall government take, offshore Australia ranks poorly compared with a variety of other investment destinations that are seeking to attract exploration spending (see Chart 2.9).

Chart 2.9: Ranking for After-Tax Returns from Exploration Investments



Source: Wood Mackenzie (2012)

The expected monetary value methodology outlined in Chart 2.9 is a technique widely used by companies to assess and prioritise competing investment opportunities. It also provides a means of comparing competing investment destinations. EMV estimates the full risked value of an exploration decision, taking into account not only fiscal terms but also the technical and commercial environment and the risks that are applicable to each prospect. The results outlined for 2012 are very similar to results when the study was undertaken in 2006.

2.5 The Treatment of Exploration in an Energy Policy Context

The treatment of exploration related activities under the Australian fiscal system cannot be viewed exclusively in the context of tax policy. Indeed in many respects, the taxation treatment of such activities merely provides a tool for affecting energy policy outcomes. In this context, to examine the company tax treatment of such costs in isolation of the broader energy policy objectives would be a manifest failure in process. A robust exploration effort is essential to a well-balanced and comprehensive national energy, a fact that has been recognised in a number of recent government focused initiatives.

The Federal Government has commenced the preparation of a wide ranging energy policy review that will culminate in the release of an Energy White Paper, possibly before the end of 2012. A draft of the Energy White Paper "Strengthening the Foundations for Australia's Energy Future" was released in late 2011. It has been the focus of significant stakeholder discussions since that time. Maintaining Australia's energy security is identified as being a paramount goal for the Australian Government – clearly a continued focus on exploration in the petroleum sector is a key element in achieving that goal. The Draft White Paper made the following observations:

> *"Australia must ensure that we are positioned to develop our energy resources – for use both domestically and to meet growing regional demand in Asia.*
>
> *Bringing on further economic development requires us to remain an attractive destination for foreign capital, and maintain an exploration pipeline to ensure that discoveries of new energy resources are made."* (p.xxiv)
>
> *"Australia remains relatively unexplored for oil and there is potential for significant new oil resources to be found in deep water frontier basins (such as in the Great Australian Bight), and the development of onshore shale gas may unlock unconventional liquid hydrocarbons as well.* "(p.87)
>
> *"Australia's competitiveness as a location for investment, and thus our ability to promote and develop a stream of new projects into the future, depends on a range of factors including prospectivity (the chance of achieving exploration success and commercial development); political, policy and regulatory settings; access to supporting infrastructure and commercial markets; and supportive fiscal regimes."* (p.88)

The Policy Transition Group (PTG) that reported into the issues associated with the introduction of the minerals resource rent tax and the extension of the petroleum resource rent tax to onshore areas and the North West Shelf project also reported on the best ways to promote future exploration and how to ensure a stream of new resource projects for future generations. In their report into Minerals and Petroleum Exploration, the PTG recognised the need for a continuing exploration effort, and made the following comments:

> *"A strong resource exploration sector is the backbone of the resource industry in Australia, ensuring continued future access to high quality deposits. The amount of investment in exploration affects the ability of Australia's resources to sustain strong growth and expand its contribution to national economic growth over the medium to long term.*
>
> *Most of Australia's major discoveries were made more than twenty years ago. To sustain the contribution of Australia's mineral and petroleum resources to national economic performance in the longer term, additional high quality resources need to be discovered and developed. Industry and government should be strategic in their approach to the continued development of Australia's resource sector, establishing policies that are conducive to exploration and will allow for the development of the next generation of Australia's resources."* (page 9)
>
> *"Under Division 40 of the Income Tax Assessment Act 1997, expenditure incurred in exploring or prospecting for minerals, petroleum and quarry materials can be immediately deducted, subject to the taxpayer passing certain tests. Expenditure on depreciating assets that are first used for exploration can also be written off immediately. These tax concessions acknowledge the high-risk nature of exploration and the economic benefits that result from it. However, immediate deductibility of exploration expenditure is only beneficial to companies with a taxable income with which to offset exploration losses."* (page 26)

2.6 Transitioning from Exploration to Production – A Complex and Uncertain Process

As outlined above, discovery rates associated with exploration wells are quite low, the conversion of those discoveries into production much lower, and Australia ranks relatively poorly in a global context in terms of returns on an expected monetary value basis. A key element of the petroleum exploration and production process is the timeline between exploration activity and production. In the context of the discussion below, it must be noted that exploration often commences well before the drilling of a well. Indeed, exploration costs can be incurred many years before the initial drilling of a first well, if such a well is even drilled.

As part of the dataset maintained by Geoscience Australia in relation to exploration wells drilled and discoveries, 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 therefore the complexities associated with any income treatment other than one treats such costs as being immediate deductible.

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

Table 2.2: Discovery to Production – Key Timelines: Australian Offshore Basins

Length of time between initial discovery and production	
▪ Greater than 20 years	16
▪ Greater than 10 years	32
▪ Greater than 5 years	59
Past petroleum discoveries not yet produced	
▪ 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 clearly demonstrates the considerable uncertainties that are associated with exploration activity. Notwithstanding the generally poor success rates associated with petroleum exploration (reflecting the high risk nature of the activity), the lengthy time periods between discoveries and a decision to produce would clearly demonstrate the impracticalities that would arise if a taxpayer was required to nominate a period over which a discovery may or may not be used.

In addition to the above, a further complexity arises in forecasting or estimating the life over which a field or well will 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.

2.7 Tax Treatment of Exploration – Previous Reviews

Rather than simply canvassing possible modification to the existing taxation treatment of exploration costs to assist in funding a reduction in the company tax rate, it is illustrative to reflect on the consideration of such costs in the context of past reviews that have been undertaken of both the overall fiscal system and the resources sector. This is particularly relevant in the context of a possible movement away from the current treatment for primarily revenue purposes into a broader more holistic approach to tax reform in the context of energy policy.

While the immediate deductibility of the majority of exploration related costs has been a central feature of the income tax provisions that have applied to the oil and gas industry for many decades, the treatment was considered as part of the Asprey Taxation Review in 1976. In that inquiry, it was recognised that the immediate deductibility of such costs was the appropriate treatment. Specifically, 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 1975 Asprey Review (which had a strong economy-wide taxation focus) was followed shortly thereafter by a major review into effects of taxation measures on the mining and petroleum industries in Australia. The Industries Assistance Commission Report, Petroleum and Mining Industries, released in 1976, examined numerous aspects of the taxation system as it applied to activities in the resources sector. The IAC review confirmed support for the case of 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 wide ranging review into the Mining and Minerals Processing Industries in 1991 (Report 02/1991), including analysing the suite of royalty and taxations provisions that impact on the sectors operations. While recognising that the issues surrounding the treatment of exploration related costs can be complex, the income tax treatment whereby costs are immediately deductible represents was considered to be the most appropriate treatment of such costs. 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)

As recently as 1999, the most comprehensive review of the business taxation system was undertaken since the 1975 Asprey. The Ralph Review examined a wide range of business related taxes, and again addressed the treatment of exploration related costs, and effectively came to the same conclusion as the 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)

As evidenced in the outcomes of a number of independent reviews, a consistent series of conclusions have been drawn that have broadly confirmed the treatment that exploration related costs should be immediately deductible.

2.8 Exploration Options Raised by the Business Tax Working Group

Earlier Announcement by the BTWG – Loss Carry Back

APPEA notes that the primary recommendation coming from the first phase activities of the BTWG was focused towards the introduction of a mechanism whereby eligible companies could offset current period tax losses against previously paid income tax. The stated rationale for such a change was that it would assist in reducing the bias in the taxation system against investing in 'risker and worthwhile' projects by small and medium sized entities. It would also act as a stabiliser by providing increased cash flows to businesses during an economic downturn. The Government has now released exposure draft legislation to introduce the measure.

While the proposed modification recognises the benefits potentially associated with utilising past taxes paid to assist companies with later period tax losses, the measure provides very little benefit to small and medium sized entities in the oil and gas industry that are presented with the challenge of seeking to maintain the after tax value of losses that cannot potentially be utilised for many years into the future. This is because many of these companies have limited (or no) past income. Their aspiration is to covert current exploration activities into future production. While this circumstance was considered in the first phase activities of the BTWG, the proposed uplift rate (the long term bond rate), a time limit on the period that losses could be uplifted (three to five years) and a higher priority being given to the loss carry back proposal, have seen this proposal not being advanced by the Government. Companies without past income continue to see the tax value of their current deductions being eroded.

General Observations

The principle of the position contained in the most recent discussion paper released by the BTWG that the existing treatments accorded to exploration expenditure represent a form of 'concession' to entities undertaking exploration activities seems at least in part directly related to the position outlined in the various tax expenditure statements complied and released annually by Treasury (see extract below).

Specifically, the 2011 edition of the Tax Expenditures Statement indicates that the value of the tax expenditure (or concession) associated with the treatment of exploration and prospecting deductions was $330 million in 2011-12, falling to $250 million in 2014-15. APPEA has been unable to locate any reference in the document as to what represents the appropriate 'benchmark' or basis for the calculation of this amount, or indeed what it covers.

B92 Exploration and prospecting deduction

Mining, manufacturing and construction ($m)

2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
130	140	220	300	330	320	290	250

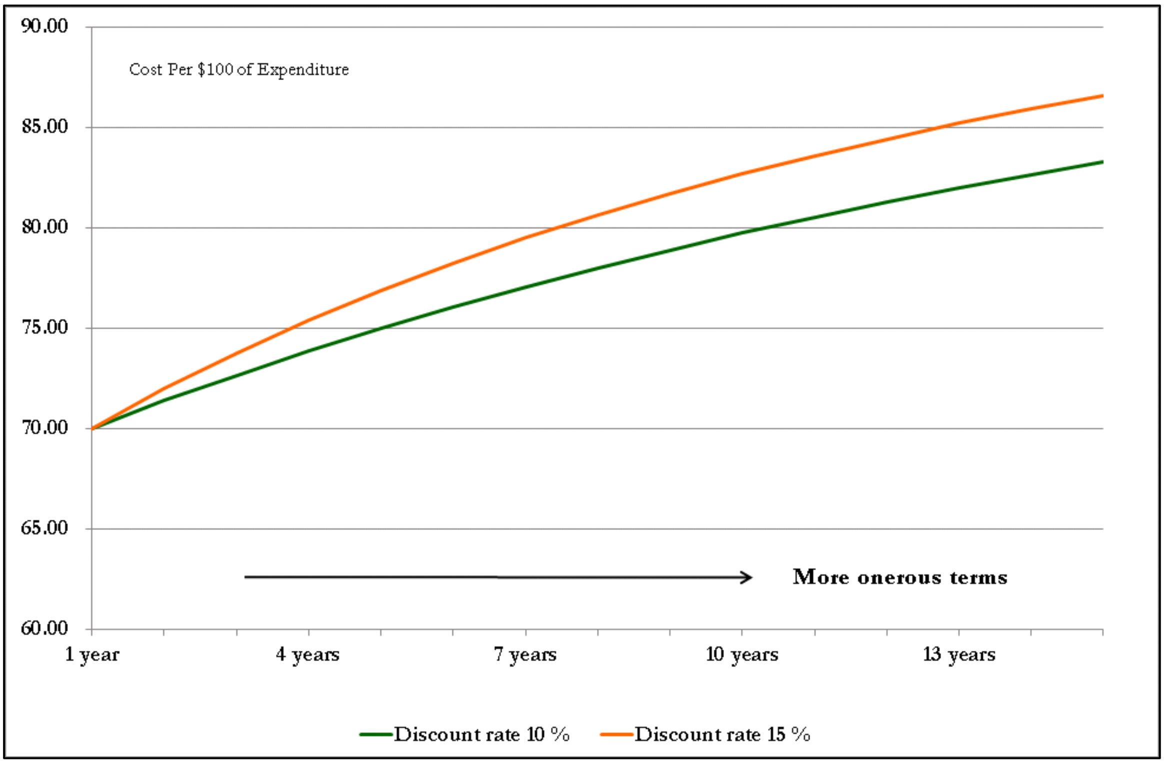
Tax expenditure type:	Deduction	*2010 TES code:*	B94
Estimate Reliability:	Medium		
Commencement date:	1968	*Expiry date:*	
Legislative reference:	Section 40-25, subsection 40-80(1) and section 40-730 of the *Income Tax Assessment Act 1997*		

Expenditure on exploration or prospecting for the purpose of mining and quarrying is immediately deductible. In addition, the decline in value of a depreciating asset is the asset's cost if the taxpayer first uses the asset for exploration or prospecting for minerals or quarry materials obtainable by mining operations, the asset is not used for petroleum development drilling or for operations in the course of working a mining or quarrying operation, and when the taxpayer starts to use the asset, the taxpayer either carries on mining operations, or proposes to carry on such operations or carry on a business including exploration and prospecting for which the cost of the asset was necessarily incurred.

2011 Tax Expenditures Statement (p108)

APPEA strongly rejects the view that the current treatment is a 'concession'. In the event that this benchmark/basis is correct, it is therefore difficult to reconcile these data estimates with the information contained in the Exploration and Prospecting Section of the BTWG's discussion paper, unless it is assumed that a number of the proposed modifications have as their primary purpose a desire to move away from the 'appropriate' treatment (if it is assumed that the Tax Expenditure Statement is correct) to one that simply is seeking to generate additional taxation savings to fund a reduction in the tax rate. Revenue savings of $1 billion per annum are identified for one option in the BWTG paper.

Chart 2.10: The After Income Tax Cost of Exploration Expenditure



Source: APPEA

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 a taxation deduction is an important factor in influencing exploration decisions as the actual costs incurred can vary depending on the taxation treatment.

Exploration costs (subject to a number of definitional and technical constraints) are generally immediately deductible for both income tax and PRRT purposes (subject to the existence of adequate income). Chart 2.10 highlights the increased 'after tax' cost associated with moving away from the current status of immediate deductibility for income tax purposes. At this stage in the investment and production cycle, the more common situation is for a company investing funds in exploration funds to be an income tax paying entity, rather than being either a PRRT/company tax payer or just a PRRT paying entity.

BTWG Proposed Measures

The comments and responses outlined below are based on APPEA's understanding of the individual recommendations. In the context of the recommendations associated with exploration and prospecting expenditure, the use of ordinary concepts in the income tax legislation presents a range of uncertainties and challenges. What represents the 'effective life' of an asset (excluding equipment that is used for exploration and prospecting activities that would be captured by the normal rules for depreciating assets) is at best unclear, as is the question of what is an exploration asset. The transitioning of a discovery to a production decision can involve decades of decision making that will be based on a wide variety of factors. At the time an exploration activity is undertaken, a taxpayer will simply not know if a production decision will be made. In this context, it is likely that a number of the principles of what represents a 'good' tax will clearly fail. Indeed, the current inconsistencies and complexities that exist within the taxation laws (and as highlighted in the recent rulings by the ATO in relation to farm-in transactions) will be further exacerbated.

In addition to the above, the nature of the exploration system in Australia where the work program bidding system has been the basis for the allocation of acreage, means that for companies that have had acreage awarded in recent years, they will potentially be confronted with revised fiscal terms despite being locked into commitments as part of the acreage release process. This effectively imposes a significant 'retrospective' element to the application of any new provisions. This is relevant to most of the exploration and prospecting options canvassed in the BTWG discussion paper.

APPEA also notes that on page 31 of the discussion paper, a comment is made in relation to lack of any benefit to junior miners. We are unsure as to how this is relevant for the treatment of companies that have income and that incur genuine business related costs. Furthermore, junior explorers benefit from the immediate deductibility of exploration when they farm-down their interests in permits which is often necessary to fund further exploration activities and is part of the sectors normal commercial practice.

- **BTWG Option B.7: Remove or reduce the 'first use' exploration deduction**

"This option would remove or reduce the immediate deduction for depreciating assets first used in exploration or prospecting by miners. Reducing the deduction would involve the asset being written off over five years or over its effective life of the asset rather than immediately."

<u>APPEA Comments</u>:

APPEA does not support the introduction of any such measure. This proposal fails to recognise the following:

- it incorrectly characterises exploration activity and attempts to accord the features of a 'depreciable life' without recognition of the low probability of an enduring economic benefit from the exploration activity due to the inherent risks associated with exploration for oil and gas in Australia;
- it is inconsistent with the use of the fiscal system to facilitate exploration as part of a comprehensive energy policy and attaches the characteristics of tax policy as being an outcome rather than as a tool to address an industry policy objective;
- the success of exploration (in the event of hydrocarbons being found) will invariably be unknown for many years. This has clearly been the experience in Australia. The decision

to produce a resource will be dependent on a range of factors that will be highly variable over time. It is entirely unrealistic to expect a taxpayer to make any form of an accurate judgment regarding the effective life of an asset (even if an asset was to exist) with such a high degree of uncertainty;

- the after-tax cost of undertaking exploration activity will rise for entities that are currently deriving net taxable income. The advice from a range of APPEA member companies is that this will influence future funds allocated for exploration.

Consistent with previous tax reform reviews, the existing treatment of exploration expenditure whereby such costs are immediately deductible for taxation purposes should therefore be retained. The existing tax treatment has developed over time as a tax policy that supports our national energy policy and is conducive for future growth of the industry which will contribute to our national economic prosperity.

The cost to tax revenue related to exploration deductions is far outweighed by the benefits associated with future tax revenue, energy security and a reduction in the trade deficit. These benefits are further discussed in Sections 1 and 3.

- **BTWG Option B.8: First use exploration deduction — intangibles**

> "This option would remove or reduce the immediate deduction for interests in exploration 'tenements', which confer upon the owner a right to engage in this activity. Instead deductions would be available over five years or the effective life of the asset."

APPEA Comments:

APPEA does not support the introduction of any such measure. It is suggested on page 31 of the BTWG discussion paper that a concern with the current arrangement is the potential transfer of interests in exploration rights immediately before conversion to a mining tenement. It is respectfully suggested that this would be relevant in the vast minority of cases and that in any case an immediate deduction may not available in such circumstances as the permit would not be used in exploration following the transfer.

The transfer of interests in exploration permits is a regular and important commercial practice that is undertaken in the oil and gas industry on a routine basis. Such transactions allow companies to share risk, ensure appropriate expertise is brought into accessing project options, providing funding options and perhaps most importantly, allow alignment in project interests that will facilitate the more timely development of petroleum resources.

It is important to understand that exiting parties in a joint venture or new entrants can become involved in different elements of a project during its life cycle. In a variety of instances, the final position of the various parties across a portfolio of projects may be substantially the same from an economic perspective, but the need to engage in a transfer of an interest or interests within individual permits makes these transactions subject to taxes and charges (including income tax).

It is important that the taxation system does not act as impediment to efficient the commercial operation of the industry. In this context, the current treatment is considered to facilitate the most efficient outcomes for the operation of the industry.

- **BTWG Option B.9: Deduction for non-depreciating exploration expenditure**

> "This option would require capital expenditure on exploration or prospecting that is not for depreciating assets to be written down over five years or the effective life of the project. This treatment would be codified in the law (that is, the expenditure would not be deductible under any other provision).
>
> This deduction relates to expenditure on non-depreciating assets used in exploration or prospecting, such as transport, materials, labour and administrative costs. The deduction is not available where the expenditure is part of the cost of a depreciating asset and, consequently, the balancing charge provisions do not apply."

APPEA Comments:

APPEA does not support the introduction of any such measure. The proposal is a purely contrived outcome that (seemingly) has its sole objective the deferment of costs that are presently currently categorised as being immediately deductible with a view to generating a short term revenue gain. To deem such expenditure as capital expenditure is inconsistent with the underlying nature of the activities that are being performed and an artificial distortion of the tax law. Indeed for most petroleum companies these costs are not capital expenditure and would be deductible under section 8.1.

- **BTWG Option B.10: Removal of immediate deduction for exploration expenditure by large companies**

> "This option would require capital expenditure incurred in exploration or prospecting to be deducted over five years rather than being immediately deductible. However, the five year write-off would only apply to companies or other entities that have a turnover over $500 million. This treatment would be codified in the law (that is, the expenditure would not deductible under any other provision).
>
> The removal of immediate deductibility would apply to exploration or prospecting expenditure in relation to depreciating assets (covered by section 40-80 of the ITAA 1997) and to capital expenditure on exploration or prospecting that is not in relation to depreciating assets (covered by section 40-730 of that Act). The former expenditure is covered by the uniform capital allowances system and a balancing charge may arise when the asset is sold. If a depreciating exploration asset is sold by the company before five years have elapsed, then the balancing charge may be reduced."

APPEA Comments:

APPEA does not support the introduction of any such measure. This measure represents a de facto removal of the immediate deduction for exploration expenditure in Australia. It represents nothing more than a thinly veiled attempt to defer the tax deductibility of costs for many entities that are most likely to be in a position to utilise deductions and provide notional immediate deductibility for many companies that would be unable claim an immediate deduction for such costs. The proposal would be highly complex, would be subject to considerable uncertainty as any turnover test would see entities potential moving above and below the threshold and provide an artificial distortion in the working of the tax system that would breach many of the criteria of good tax policy.

In addition, it would potentially create a significant distortion within the exploration systems of all governments due to differing tax treatment of different types of entities. For example, a large international company with limited existing operations in Australia would potentially be placed in an advantageous situation relative to incumbent companies with existing Australian production.

- **BTWG Option B.11: Exclude feasibility studies from exploration expenditures**

"This option would remove feasibility studies from the definition of exploration and prospecting expenditure under section 40-730 of the ITAA 1997. The main focus would be on removing studies undertaken to evaluate the economic feasibility of mining or quarrying a site once minerals have been discovered. Instead of being immediately deductible, the cost of feasibility studies would be deductible over five years.

Tax return data is not sufficiently disaggregated to allow Treasury or the ATO to identify what proportion of expenditure currently deducted under section 40-730 relates to feasibility studies. Submissions on this point would assist the Working Group in considering whether this option should be pursued further."

<u>APPEA Comments</u>

APPEA does not support the introduction of five year depreciation provision, as feasibility costs represent a critical component of the broader activity of undertaking exploration.

Section 40-730 of the ITAA 1997 includes feasibility costs within the definition of exploration and prospecting expenditure. This treatment recognises both the nature and the timing of such costs within the project assessment process. The ability to both identify and address the issues associated with commercialising a resource is a critical component to the overall exploration process.

Feasibility studies take many forms and are critical to both the identification and decision to commercialise petroleum resources. Modern day petroleum projects require significant capital expenditure and as a result, a detailed degree of project and resource evaluation is necessary before determining whether the resource can be commercially developed. Technical, engineering, financial, market, regulatory and a variety of other risks must be identified, assessed and addressed.

The complexity significantly increases when gas resources are being evaluated. For many large scale gas projects, the capital costs of project facilities can often create significant commercial uncertainty and give rise to a barrier to project development. Investors require a significant degree of certainty on the magnitude of costs when evaluating commercial viability. This evaluation process can involve surveys, technical studies, engineering studies, analysis and evaluation of project design, non-technical studies such as environmental, government and social impact and determination of overall costs estimates to a level of certainty satisfactory to the proponent to warrant considering the selected design concept further. This phase of the project would often be carried out whilst the proponent holds a retention lease over a discovery. From a commercial perspective, for a petroleum resource to be booked as "proven and probable" reserves for financial reporting purposes, it is not only necessary for its existence to be confirmed but also a determination made that it is commercially viable to exploit. The assessment and evaluation process generally must be completed prior to reserves being booked and this process involves a significant amount of financial and technical risk in exploring and assessing the commercial viability of the resource.

SECTION 3: DEVELOPMENT AND PRODUCTION ACTIVITIES

> *"In addressing the industry impacts of the Government's proposals, the paper observes that whereas the ANTS II package delivered major benefits of cost reduction across industry generally, the main beneficiaries of the Government's proposals stemming from the Ralph Review are the finance and insurance sectors. The paper questions the macro-economic stimulatory effects of these benefits given that the demand for insurance and financial services is primarily a 'derived demand', i e. one which is heavily dependent on the level of demand in industries which call on the services of the insurance and finance sectors."*
>
> *"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

The Australian community must recognise the total benefits enjoyed by the exploitation of non-renewable resources, rather than focus narrowly on a single component of the return, (such as a specific resource tax), and acknowledge that only by developing the resources will the community enjoy any return.

As previously identified by APPEA, the benefits of projects are numerous and include foreign exchange receipts, employment (including tax on employment income), investment in infrastructure, income tax, resource taxes, payroll tax, contributions to community programs, GST, economic multiplier effect on wider economic activity, security provided by self–reliance on energy and greenhouse benefits related to Australia having an abundance of clean gas.

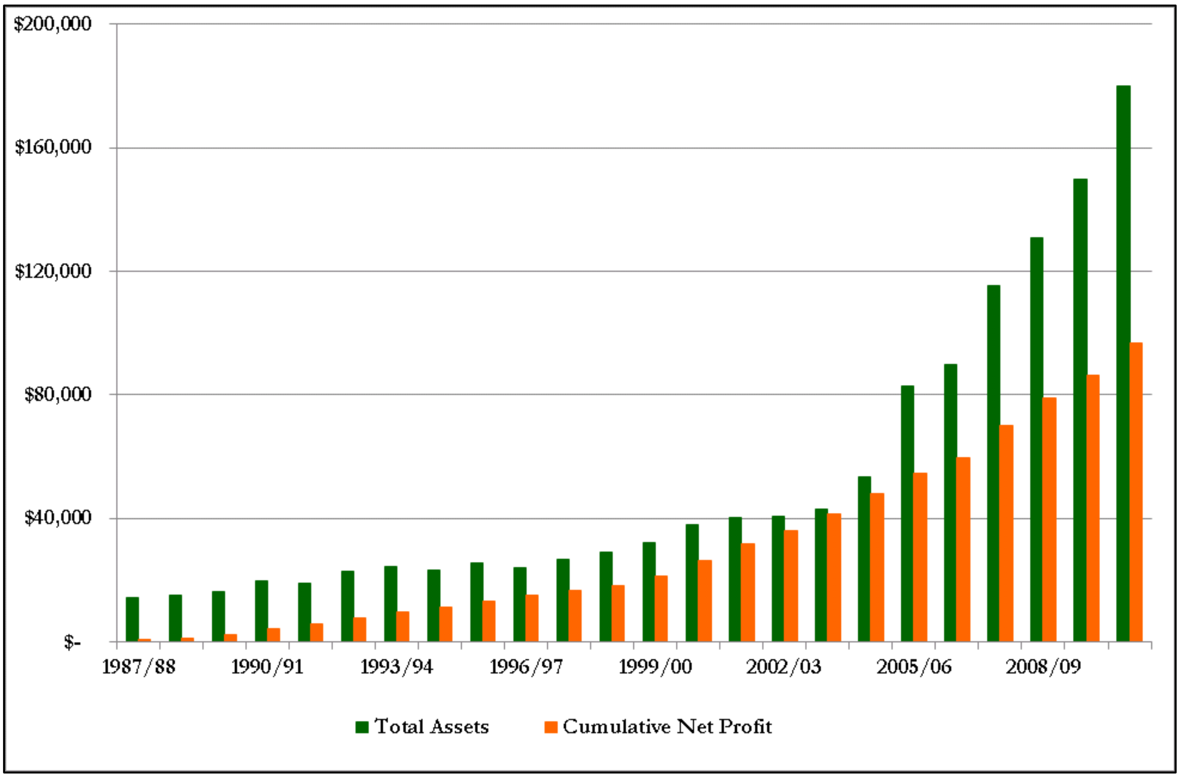
If the benefits are to be enjoyed, then the fiscal regime needs to be internationally competitive in order to attract the risk capital required to exploit the resources. This should ultimately determine the return that the community can expect from the use of its non-renewable sources. As we have previously stated, a principal determination of international competitiveness that Government can influence is the total fiscal regime.

Establishing a process which defers capital allowance deductions for exploration expenditure and non-exploration expenditure for the purposes of funding a decrease in the company tax rate disproportionately impacts the oil and gas industry and represents an illusory and unsustainable approach to tax reform. It also seems to be contrary to the BTWG's terms of reference which ask the BTWG to focus on reform options that relieve the taxation of new investment.

In addition, whilst resources are non-renewable, the on-going return to the community from the use of non-renewable resources is influenced by how and when the community re-invests those returns.

Chart 3.1 compares the industry's 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 during the period.

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



Source: APPEA Annual Financial Survey

It is clear that the industry has provided a solid foundation to the overall level of growth that is well above the profits that have been generated. From an economy wide perspective, this would suggest the industry has been a major contributor to economic growth, with funding being generated from areas other than retained earnings.

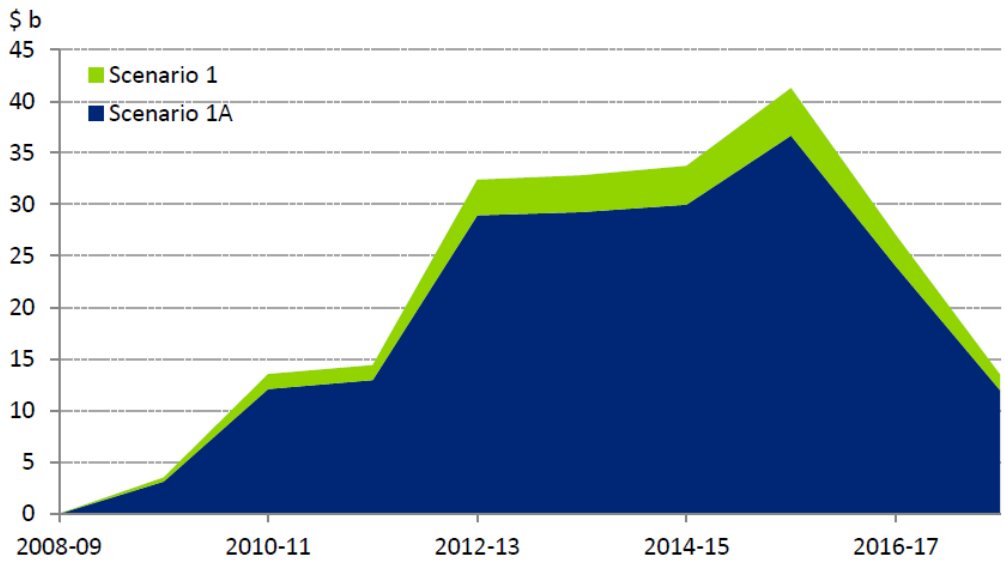
3.1 Economic Impact of a Project Deferral

A key objective of tax reform is to position the Australian economy to achieve sustainable economic growth and improve productivity. Tax reform that merely leads to a redistribution of wealth without the economy wide benefits will represent a major lost opportunity (and a deadweight loss to the economy). Section 1 of this submission examined the economy wide impacts of the industry under a range of growth scenarios. It is illustrative to understand the potential consequences associated with supressing the growth of the industry. This is best understood in comparing the outcome on a business as usual (or base case) scenario with one where a major development does not proceed. This could arise as a result of any number of factors, including through possible changes to taxation settings that negatively influence the decision making process of a potential investor.

The analysis carried out below compares a base case (Scenario 1) with a modified case (Scenario 1A) where an 'average sized' LNG project does not proceed. Scenario 1 capital expenditure of an estimated value of $212.2 billion is reduced by $23.2 billion to an amount of

$189.0 billion. In addition to the reduction in capital expenditure, there is also a fall in operating expenditure over the full life cycle of the project.

Chart 3.2: Oil and Gas Industry Capital Expenditure: Modified Development Scenario



Source: Deloitte Access Economics

The results presented below compare the economic impacts of Scenario 1 with the outcomes forecast under Scenario 1A (the values for Scenario 1A are presented as the bracketed amounts).

Table 3.1: Key Economic Outcomes – Impact of a Project Shock

% Derivation from the Baseline Sc1 (Sc1A)	NPV	2012	2015	2025
GDP		1.44 (1.28)	2.17 (1.94)	1.91 (1.71)
Employment		1.03 (0.91)	0.74 (0.65)	0.09 (0.09)
Real Wage		1.33 (1.17)	2.15 (1.89)	1.80 (1.56)
Consumption		1.70 (1.51)	2.23 (1.97)	1.65 (1.45)
Investment		14.58 (12.99)	14.34 (12.74)	1.85 (1.71)
Derivation for the Baseline Sc1 (Sc1A)				
GDP ($b)	261.4 (234.4)	21.0 (18.8)	34.3 (30.7)	37.9 (34.1)
Employment (FTE)		103,105 (91,358)	77,779 (68,480)	11,537 (11,490)

Source: Deloitte Access Economics (2012)

The results clearly identify a major impact to a range of economic parameters, ranging from a fall in the level of employment in the base year of slightly less than 12,000 full time employees, to a reduction in the net present value of gross domestic product of around $27 billion. While not presented above, there would also be a significant reduction in the level of taxation to governments over the full life cycle of the project.

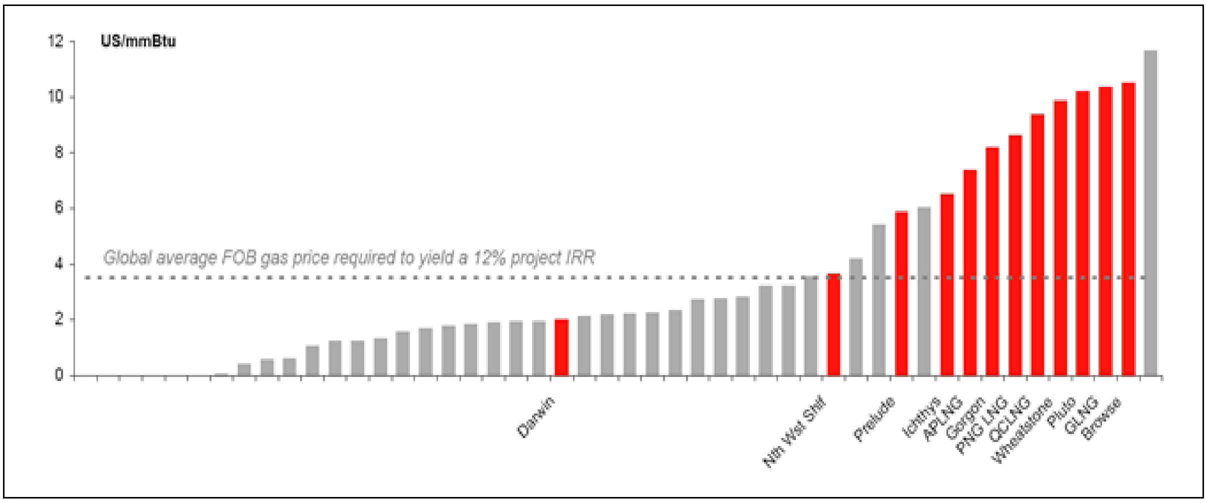
In the context of the above results, there are clearly significant consequences associated with reforms that have as their outcome a deferment in investment activity in major capital projects. The remainder of this section identifies and discusses a range of issues in relation to the competitiveness of the Australian gas industry in a global context and the possible impacts associated with reform options outlined in the BTWG discussion paper.

3.2 <u>Australia's Oil and Gas Industry – A Global Context</u>

In order to achieve economic growth, it is necessary to have a fiscal system that enables Australia to be internationally competitive. This requires an understanding of the international dynamics within which each industry operates. 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 foreign capital and expertise. The loss of a dollar of investment in the Australian oil and gas industry is not replaced by a dollar of investment elsewhere in the economy. This is the reality.

In terms of pursuing capital, Australian projects are significantly challenged from a cost perspective. As measured by the price required to generate a threshold project return, Australian LNG projects generally require the highest average product prices to achieve the required return on capital (Chart 3.3). The fiscal terms that apply to these projects are one of the few mechanisms available to the Federal Government to improve the competitive position of these investments.

Chart 3.3: Australia Project Costs – A Global Context

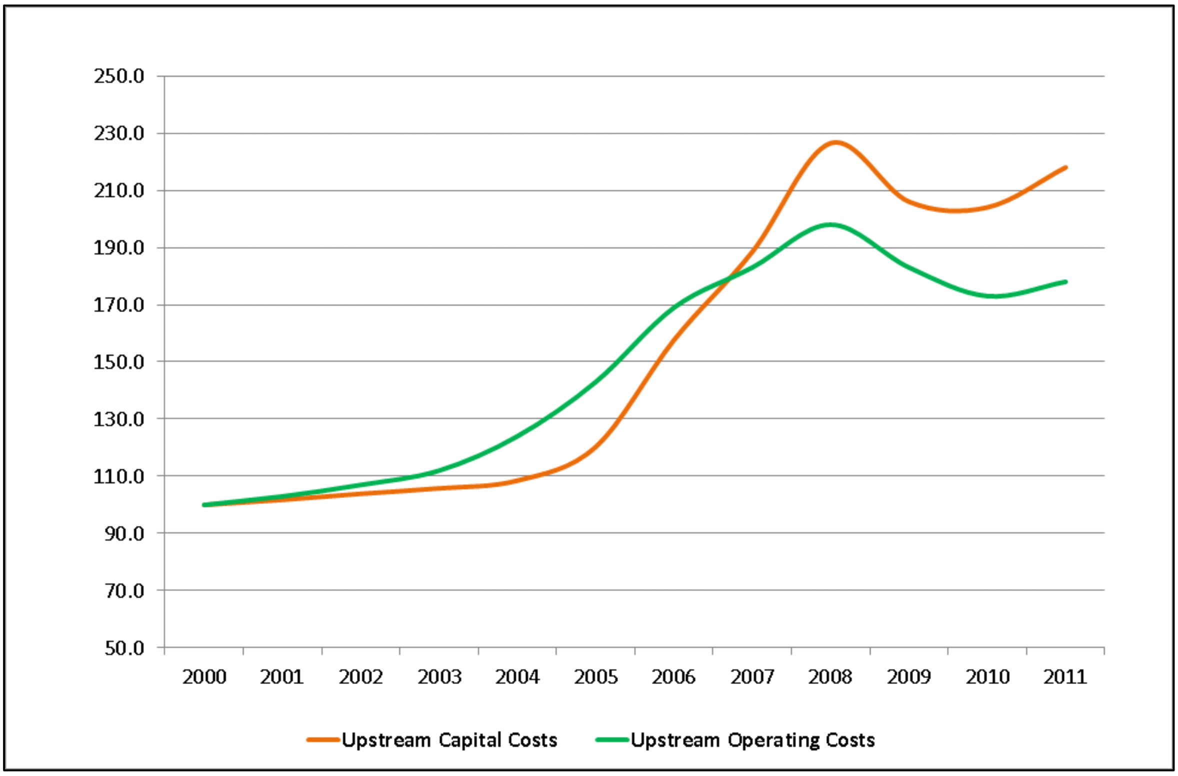


Sources: Macquarie Equities Research, Wood Mackenzie (2011)

From a cost perspective, after a short period of decline during 2009, the costs of building and operating upstream oil and gas facilities have continued upwards and are now approaching the record levels seen in the third quarter of 2008. Globally, development and operating costs have dramatically increased since 2000 (Chart 3.4).

These cost increases will place further pressure on both the ability of existing projects to contain costs and perhaps more importantly, challenge new projects in terms of achieving the necessary returns to justify the commitment of capital.

Chart 3.4: Upstream Cost Indices



Source: HIS CERA

3.3 Impact of Taxation on Project Returns

Why have gas project been developed slower than oil projects?

Some of the largest gas discoveries in the world have been made in Australia, yet much of this discovered gas remains undeveloped. In 2005, Wood Mackenzie produced a report titled "Offshore Australia Economics – Gas is not Oil!" and analysed why this was the case and why, at the same time, many oil discoveries in the same province had been developed. Their conclusions were that the economics of gas exploration and development are much less attractive than oil for the following principle reasons:

- gas prices are generally lower than oil;
- gas production profiles are flatter and longer than for oil developments; and
- gas discoveries take longer to develop than oil.

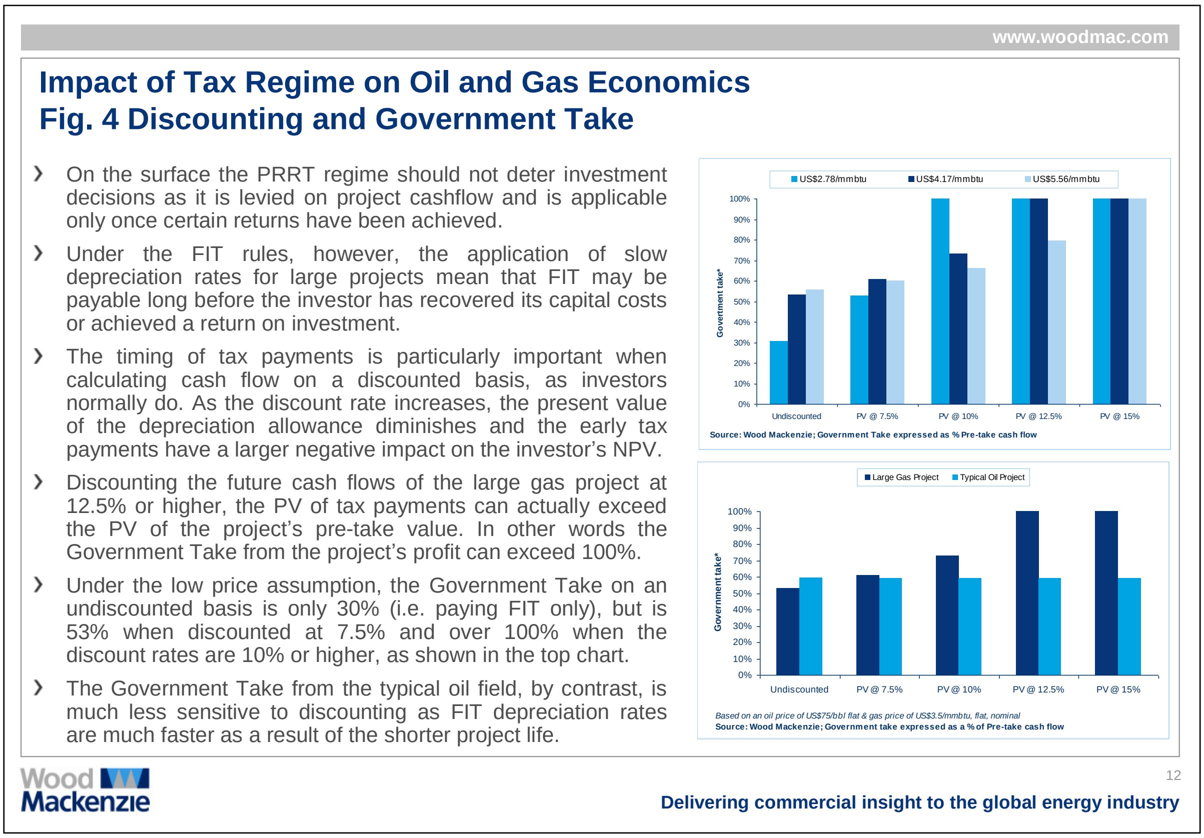
The Report stated that

> *"(f)or a number of reasons, the economics of large gas projects offshore Australia are fundamentally different from typical oil projects. While the PRRT regime is progressive, the very long depreciation schedule for federal income tax can create a very high government take, when considered on a discounted basis, as investors are likely to do. This has the effect of driving up the breakeven price for the large, stranded gas projects – making them potentially less attractive than other projects in the region.*

With oil prices as high as they are, it may appear odd that investors in the petroleum industry could be seeking tax incentives. As this article demonstrates, however, gas is not oil, and the economics of the large gas discoveries continue to appear marginal to investors, even when oil prices are high. While securing a high gas price will remain the investor's primary objective, the Government may wish to consider reducing its take from large gas projects, if it wishes to stimulate development of its gas resources. The most obvious element to review would be the federal income tax depreciation schedule, which appears anomalously slow in comparison to fiscal regimes elsewhere."

An update of this report was commissioned by a number of APPEA member companies in late 2008 that provided a further snap shot of the impact of taxation on oil and gas economics in Australia. The key results are summarized in Slide 3.1.

Slide 3.1: Impact of Fiscal terms on Project Economics



Source: Wood Mackenzie, 2008

The updated report confirmed the findings of the earlier study in that income tax is payable well before an investor has recouped the investments costs associated with gas projects and that the early payments of income tax can lead to the government take exceeding 100 per cent of a projects net present value.

3.4 Impact of Recent Fiscal Reforms

Prospectivity and the share of production or profits taken by governments are often cited by oil and gas companies as being two of the most important factors affecting investment location choices around the world. As highlighted in Section 1, APPEA estimates on average that around half of the industry's pre-tax profits are paid to governments. Oil and gas producers are subject to company tax and the full range of other state and federal government taxes applying to business generally, as well as to resource taxes (in some cases, multiple resource taxes apply).

Since the early 1990s, there have been a number of taxation changes that have affected the upstream petroleum industry. The reforms have to varying degrees had both positive and negative influences on the sector. A summary of some of the key changes is outlined below.

Income tax:

- reduction in the company tax rate to 30 per cent (positive)
- capital allowances for intangible petroleum assets (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).

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 – now 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)

The impacts of the different measures vary across projects and companies. On balance, and taking account of the changes made in competitor nations, our reforms have likely resulted in a decline in Australia's relative competitive position.

3.5 Company Tax and Long Life Capital Activities

As noted above, the tax system plays a key role in influencing investment decisions in the Australian petroleum exploration and production industry and Australia's ability to compete for international investment funds. The treatment of capital related 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, those associated with 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 within 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 in that the net present value of costs which can be immediately deducted are usually greater than the value of plant and equipment costs which are generally depreciated at historical cost over long 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 rates above the rate that would otherwise apply based on an assets engineering or effective life.

The Current Provisions

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

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

The result is that a taxpayer is able to bring forward a deduction to earlier income years than if a longer life applied. The overall deduction over the life of the asset is unchanged. The introduction of the caps has been one of the primary reasons why companies have been prepared to commit the enormous level 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 produce oil and gas.

In the 2006-07 Federal Budget the Government announced a modification to the depreciation arrangements with a view to ensuring that Australian businesses are able 'to stay up to date with new technology'. The decision changed the diminishing value rate under the capital allowance regime for determining depreciation deductions from 150 to 200 per cent for all eligible assets. The measures were also designed to ensure that businesses remained competitive. Significantly, it was stated that:

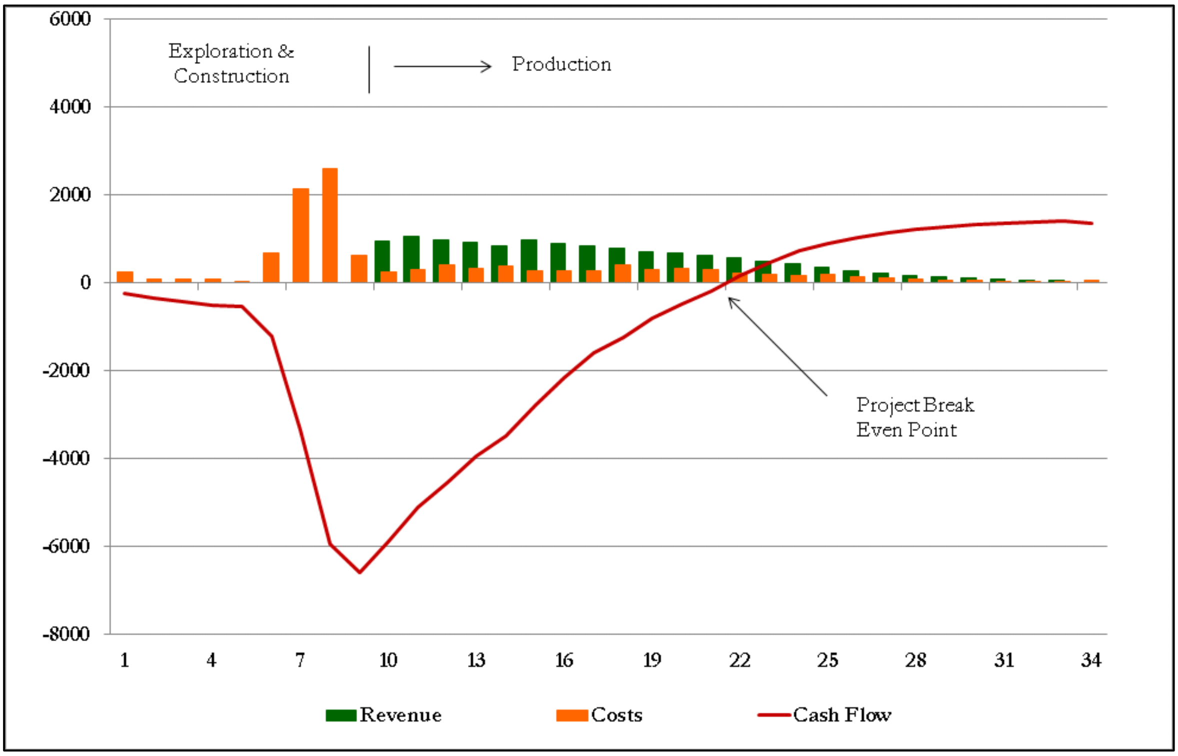
> *"The measure encourages efficient investment by ensuring that depreciation deductions for income tax purposes more closely reflect an asset's actual decline in value. This will enhance productivity and help sustain strong economic growth."* Media Release, Federal Treasurer, 9 May 2006

Long Lead Time Items Are Already 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 expenditures are incurred and when a tax deduction can be 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 starts to diminish prior to the commencement of production. For example, in the case of large gas projects, development expenditures are often incurred more than five years prior to the commencement of physical production and the investment decision is made prior to incurring the expenditure..

Chart 3.5 depicts the profile of costs and revenues for what could be considered to be a representative large scale gas to liquids project. 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 take 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.

Chart 3.5: Indicative Project Discount Cash Flows ($ million)



Source: APPEA (Based on Unpublished Project Data)

In the example above, 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 to the above, 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 standards that the industry must operate 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 highly volatile operating environment to ensure the highest standards in equipment reliability. While a piece of equipment may have 'theoretical design life' of a certain number of years, to suggest that this would be the period for which it is actually used would be misleading.

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 guide as to the economic 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 operate 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;
- additional hydrocarbon reserves are recoverable; and
- the price for the product makes it economic to continue production.

In addition, government regulation may also necessitate design lives well in excess of the economic life of the project. In offshore locations, it is necessary to engineer plant to withstand the worst of statistically possible weather conditions, for example 100 year storms, cyclones or wave heights. At remote onshore locations, the extremes of hot and cold temperatures also present significant engineering challenges. Safety of the industry's workforce and environmental considerations also require plant to meet the highest standards integrity standards.

3.6 A Comparison of Key Company Tax Terms – Gas Projects

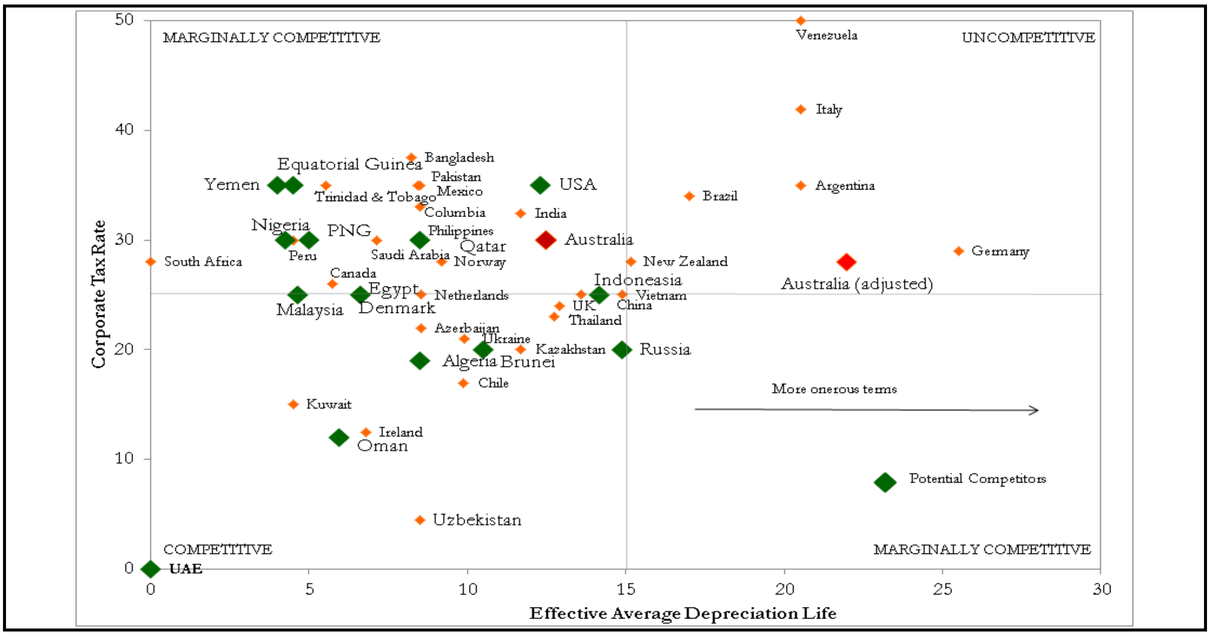
APPEA notes that in the BTWG discussion paper, data and commentary is presented in relation to international trends and movements in the company tax rate. It is also noted that there has been a trend towards broadening the base. The primary focus of the discussion is in the context of the OECD experience. For countries seeking to attract capital for large scale gas projects, a more meaningful comparison are the fiscal terms that apply in competing jurisdictions. The vast majority of these are non-OECD countries.

From the outset, in drawing conclusions about Australia's relative competitive tax position with countries seeking to commercialise gas projects, it is clearly important to recognise that other taxes and/or fiscal systems can exist. Different resource taxation provisions and income tax parameters apply in different countries. Notwithstanding these differences, it is still illustrative to compare a number of key impact tax parameters.

Depreciation/Tax Rate Comparison

APPEA first commissioned a study in 2006 to compare two key company tax provisions for gas projects across a number of competing jurisdictions. To assist the deliberations of the BTWG, APPEA engaged KPMG to update this analysis to take into account any subsequent changes. Specifically, the analysis compares the company tax rate that applies 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 3.6.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.

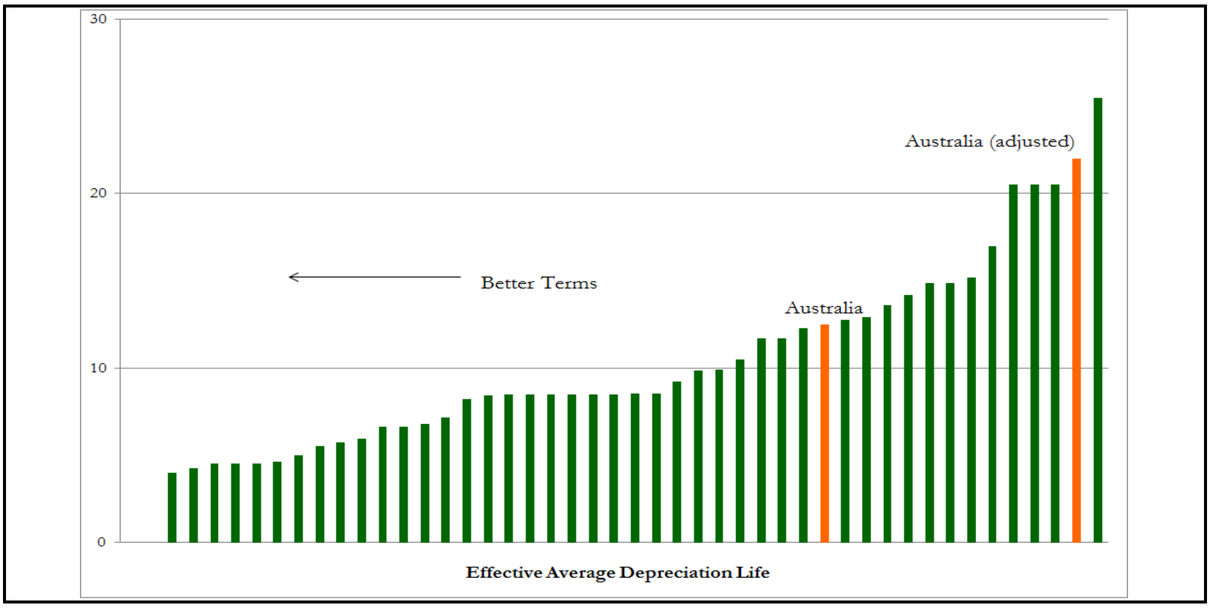
Chart 3.6: Company Tax Rate/Depreciation Comparison – Gas Projects



Source: APPEA (based on data supplied by KPMG)

Any decision to extend the write-off periods to periods even longer than currently apply (as highlighted in the chart) will further disadvantage Australian producers compared with other jurisdictions. In reality, a reduction in the company tax rate will only partially ameliorate the impact of more harsh depreciation terms because of the capital intensive nature of the petroleum industry.

Chart 3.7: Average Write-Off Periods for Capital (number of years)



Source: APPEA (based on data supplied by KPMG)

Chart 3.7 isolates the analysis into depreciation terms only. It demonstrates the average period over which plant can be depreciated for gas related activities. As indicated, the shorter the period, the more competitive the terms. It is clear that Australia already ranks relatively poorly with the 15 year write-off terms. Any move to lengthen this period will further disadvantage Australian companies making new or incremental investment decisions.

The accelerated depreciation provisions that were in place up until the end of the 1990's helped mitigate against the above position, while the 15/20 year effective life caps introduced in 2002 only go some way to addressing the competitive disadvantage. As indicated above, the negative impacts associated with the use of long write-off periods for plant and equipment are exacerbated by the mismatch in timing between when expenditures are incurred and when a tax deduction can first be claimed.

In summary, the comparison shows that most current and prospective gas exporting countries enjoy low effective company tax rates and allow project proponents to depreciate capital over periods of considerably less than ten years.

A Broader Tax System Comparison

On a broader level, a comparison of the incidence of international taxation regimes is undertaken annually by PwC (PricewaterhouseCoopers). The most recent review covered 183 countries and included an evaluation of the total tax rate applicable under each jurisdiction. While the same caveats apply to this data as did the company tax/depreciation comparison above, some very clear trends remain very evident.

Table 3.2: Total Tax Rate – Selected Gas Producing Countries

Country	Overall Ranking
Qatar	6th
UAE	7th
Saudi Arabia	9th
Brunei	16th
Oman	20th
Trinidad & Tobago	40th
Nigeria	56th
Malaysia	62nd
Indonesia	67th
Norway	104th
Papua New Guinea	107th
Egypt	111th
United States	131st
Australia	133rd
Algeria	172nd

Source: PwC, "Paying Taxes 2012 – The global picture"

The rankings are based on a generic business case study that was prepared and applied to each jurisdiction. It is clear that Australia ranks relatively poorly when compared with a suite of gas producing countries. While there are many factors that must be taken into account in drawing definitive conclusions from such a comparison, it highlights an important underlying message.

3.7 The Economic Life of Capital Assets

The BTWG discussion paper identifies a number of actions that have been undertaken by overseas jurisdictions, as well as past base broadening exercises in Australia in the context of the tax treatment of capital. The paper notes:

> *"In many cases, countries have opted to reduce or eliminate accelerated depreciation allowances in order to more closely align allowances with economic rates of depreciation." (p17)*
>
> *"Past base broadening efforts have often included measures to move the tax system closer to the benchmark of having tax depreciation reflect the economic life of an asset…..*
>
> *The Working Group is conscious that while a move towards economic depreciation for all assets could reduce distortions and improve simplicity, it is difficult to measure economic depreciation accurately and transitional arrangements could add complexity to the system. Rates of economic depreciation will depend on a number of factors including the type of asset, how it is used and where it is used."*
> *(p22)*

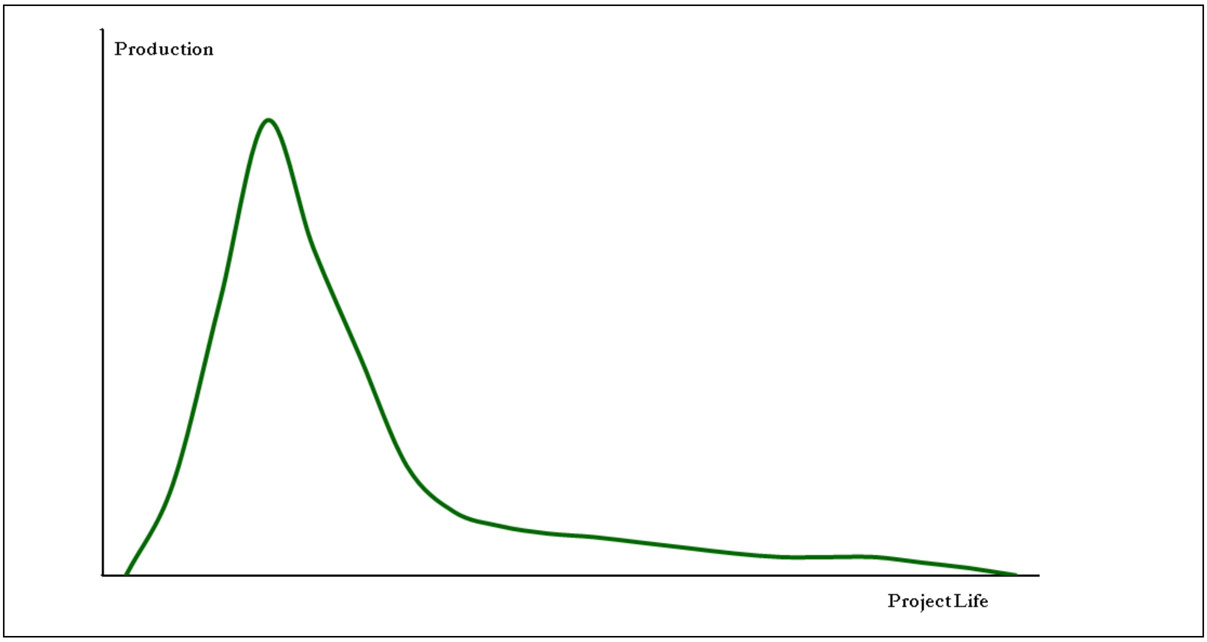
While the paper notes that it may be difficult to measure economic depreciation accurately, it is nonetheless an important concept, as the approach that has been adopted by the Commissioner of Taxation in the past to determine the 'effective life' of assets often significantly departs from a concept that measures the economic life of an asset. This is perhaps best demonstrated by reference to an example in the petroleum industry in the context of a conventional oil project.

The Commissioner in issuing effective life determinations for assets will often place a very strong emphasis on the engineering life of equipment. As noted above, much of the equipment in the oil and gas industry (for a variety of commercial, regulatory and safety reasons), is required to have a theoretical engineering life well in excess of the time frame over which the equipment is intended to be used. Very rarely will a company 'under-engineer' equipment, as the cost of remedial work, safety consideration or additional capital construction costs can be prohibitive or simply impractical.

Just as importantly, the 'economic life' over which equipment is used in oil projects is, by definition, more closely aligned to the production life of the project. Chart 3.8 plots what may be considered the 'typical' production curve for an oilfield.

The vertical axis plots production and the horizontal access plots time. It is evident from the chart that production is 'front-end loaded'. Specifically, production is often front end loaded in a manner that reflects the technical imperatives associated with maximising the early recovery of hydrocarbon resources. While many industries are characterised by relatively flat or increasing production profiles over time, many of the projects in the petroleum industry are confronted with a very different framework.

Chart 3.8: Indicative Oil Project Production Curve



Source: APPEA

If the taxation system for this type of project is to correctly assign a depreciation profile to the economic life of plant and equipment, it would clearly need to closely match the depletion of the resource. The rate of depletion of the resource can be difficult to accurately measure at the time when an investment decision to acquire the relevant plant and equipment is made.

A summary of the life of a range of Australian oilfields is at Attachment 4.

In the context of the current review being undertaken by the BTWG, any recommendation to change the existing depreciation arrangements must address the issues associated with the economic life and practical matters connected with the life of plant and equipment. To do otherwise (or to simply rely on the 'engineering life' methodology) will result in a flawed outcome that merely reinforces the bias against capital investment under the current system.

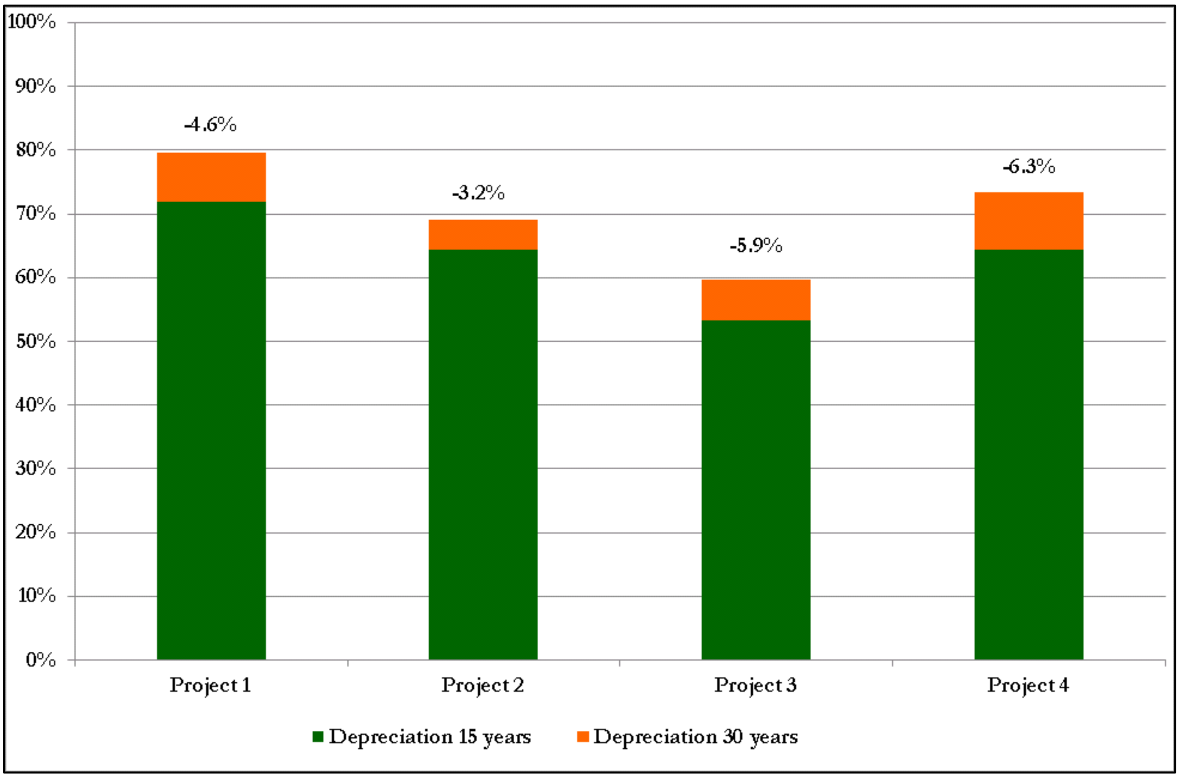
3.8 Tax Base/Tax Rate Trade-Off

Much discussion in the context of tax reform has surrounded the argument that a reduction in the company tax rate is of benefit to the business community. In isolation, this statement may be correct, however in the context of reform to the current business taxation system, modifications to the taxation base that are introduced purely to fund a reduction in the tax rate must be viewed in a wider context. The revenue neutrality condition that has been placed on the current phase of the activities of the BTWG places a fatal constraint in achieving the improvements to economic growth that can arise from genuine reform to the business tax system. The current process if taken to one conclusion would see a potential redistribution of taxation without the benefit of improvements to economic efficiency. Indeed, 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.

In the context of the current discussions, 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.

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. This is much longer than the three-to-ten year write-off periods available to gas projects overseas that compete with Australian projects for investment capital and gas customers. The existence of the 15/20 year statutory caps for oil and gas assets is to address both competitiveness issues and a range of other factors (including energy policy objectives) that would otherwise act to discourage investments in such projects. While oil and gas companies are best placed to demonstrate the consequences on the basis of actual projects, the results for a range of simulated projects are outlined below to highlight the disadvantages that would be faced by investors in long term gas projects with a change to current depreciation arrangements.

Chart 3.9: Estimated Government Tax Take of Total Project Cash Flows - Net Present Value (Percentage Take)



Source: APPEA

As can be noted, the government 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. It is illustrative to understand the reduction in the company tax rate that would be necessary to compensate for the changes to the effective life provisions to one based on a write-off of 30 years (indeed this 30 year period may be conservative for some projects). The number at the top of each project bar represents the reduction in the company tax rate that would be necessary to place the project in the same financial position in terms of the project internal rate of return. The variation in the rates reflects the different project structures, cost profiles and production streams associated with each project. A two per cent reduction in the company tax rate would be manifestly inadequate.

3.9 Capital Depreciation and Other Options Raised by the Business Tax Working Group

General Comments

The BTWG discussion paper makes the comment that the business tax system should be neutral and should not seek to favour certain types of investments over others. The paper does not however discuss in detail the departure aware from the concept of 'economic depreciation' to the use of the effective or engineering lives that is the basis upon which the Commissioner of Taxation uses to determine the life of assets. The discussion paper shifts from the 'economic depreciation' basis for depreciation to the use of the Commissioner's effective lives without discussing the economic efficiency implications.

It is also noted with significant concern that the proposed implementation mechanism for Items B.1 and B.2 suggest that "(new) depreciation arrangements have been assumed to apply to contracts that are signed, construction that commences, or assets whose holding commences after this date." It is (correctly) noted however that there can be a significant lag between when a project commitment is made and when contracts commence or are executed. If any variations to the current provisions were to be introduced (a position which is opposed by APPEA), it is respectfully suggested that any change to the provisions that would apply to projects that have already moved past the final investment stage (but that pass the above timing test) would represent a respective change to the tax laws and would penalise a range of entities that have committed to projects.

- **BTWG Option B.1: Reduce the diminishing value rate for depreciation from 200 per cent to 150 per cent**

"The Option would involve reducing the diminishing value rate of depreciation from 200 per cent to 150 per cent."

APPEA Comments:

APPEA does not support the introduction of any such change.

As discussed above, this measure was introduced in 2006 in the context of the 2006-07 Budget. As noted in the Treasurer's announcement in 2006, the measure does not change the effective life of the relevant assets or the total dollar amount written of over the assets life. In this context, it does not represent a revenue saving measure for the Government, but instead is a change in timing as to when tax is payable.

APPEA notes that the arguments used by the Federal Treasurer in 2006 as the rationale for increasing the diminishing value rate from 150 to 200 per cent are acknowledged in the discussion paper, but it is suggested that the difficulty in measuring economic depreciation could provide a basis for the measure being revisited. Without a discussion on how 'economic depreciation' can be best accommodated under the capital allowance system, it is difficult to understand how a conclusion can be drawn by the BTWG that the provision should revert to that which applied prior to the 2006-07 Budget (a 150 diminishing value rate).

Not only would a change undo an important (and justified) recent reform, it would represent a fundamental change that would directly disadvantage entities investing in long term and wealth creation type assets.

- **BTWG Option B.3: Remove the capped effective life provided to depreciating assets used in oil and gas extraction and petroleum**

"This option would involve removing the statutory effective life caps available to depreciating assets used by the oil and gas and petroleum industries as outlined in 40-102(5) of the ITAA 1997. The affected assets would therefore be depreciated in line with their effective lives, rather than the capped lives outlined in the legislation."

APPEA Comments:

APPEA does not support the introduction of any such change.

The petroleum industry has been a major investor of capital in the Australian economy for more than half a century. Not only has the industry reinvested profits, but it has sourced vast sums of capital that have stimulated economic activity and led to the creation of long term enduring assets.

The existing provisions were introduced in 2002 as a result of a considered and comprehensive process, including a review undertaken by a Parliamentary Committee. The measure addressed a concern at the time about the ability of Australia to compete with other countries seeking to develop gas resources. The case is arguably even strong today than it was in 2002 as global competition is even more intense with new countries seeking shares in the global gas market.

Australia already does not compare favourably with the majority of other gas exporting countries. Any decision to extend the effective lives will merely worsen Australia's competitive position from a fiscal perspective. There are a range of factors that make it inherently risky in investing in the oil and gas projects – some of these risks are at least in part ameliorated by the existence of the current effective lives. Technical, market, contractual and geological factors often necessitate the construction of plant that has a 'technical' or 'engineering' life well in excess of the economic life of the equipment.

Any movement away from the current 15/20 year write-off periods will have a major impact on the economics of gas projects, which by their very nature are often marginally economic. The Government tax take from these projects is already well in excess of 50 per cent of the overall project revenue net present value. Any variation will threaten future projects, as well as extensions of existing project.

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.

- **Option A.4 — Cap interest deductions for all business taxpayers (excluding banks)**

This option would involve:
- Removing the thin capitalisation rules from the domestic law.
- Placing a cap on the deductibility of interest by limiting the net interest expense (the excess of interest paid over that received) to a set percentage of 'earnings before interest, taxes, depreciation and amortisation' (EBITDA) for all taxpayers, excluding banks.

This means there is an uncapped deduction of interest expenses up to the amount of interest income.

The limit would apply regardless of whether the taxpayer operates only domestically or has offshore operations. The international practice in respect of the EBITDA benchmark rate ranges between 25 per cent (France) to 50 per cent (the US (related party debt focus) and New Zealand (narrow targeted application) with the majority clustered around 30 per cent. Countries that have adopted this approach have generally allowed for the carry forward of unused EBITDA capacity and denied interest deductions — see Appendix F for further details.

<u>APPEA Comments:</u>

APPEA is unable to form a final view on this proposal without further analysis, but has a number of concerns.

Further consultation on this proposal is necessary, with a clear articulation of the policy objective and further analysis of whether this proposal is the most effective way to achieve that. If such a proposal were indeed to be introduced, appropriate transitional rules would also be extremely important.

We would like to better understand how an EBITDA-based test could disadvantage taxpayers compared to the existing thin capitalisation rules (which we note, when combined with transfer pricing rules, already provide a powerful tool to limit interest deductions to commercially realistic borrowing terms and gearing). The impact on an entity's EBITDA of transactions generally will be disproportionate to the impact of those same transactions on an entity's asset base and therefore there will be an increased propensity for entities to fail the EBITDA criteria as compared to the debt/equity criteria.

We have concerns of potential inequity arising if:
- a taxpayer's taxable income doesn't track their EBITDA, for example timing fluctuations from unrealised accounting 'mark-to-market' adjustments for foreign exchange, derivatives (eg commodity, electricity and carbon units) and investments classified as 'available for sale'; or
- a taxpayer experiences an extended period of no or low profitability during 'start-up phase', or experiences significant swings in profitability.

When contemplating a significant capital-intensive investment which by necessity requires debt funding, this proposal would appear to provide an unfair advantage to diversified groups with mature income producing assets (and thus a high and stable EBITDA), compared to stand-alone project-specific entities.

It also has the potential to favour service industries ahead of those that are capital intensive (unless offered as an optional alternative, as in New Zealand). The introduction of such a rule may not only fund a rate cut at the expense of capital intensive industries, but may also result in them funding increased interest deductions for some taxpayers above levels available under the existing rules.

The fact that certain developed OECD countries have adopted an EBITDA-based test (apparently largely a response to highly leveraged private equity buy-outs) does not mean Australia should automatically follow, as our economies differ in some important respects. We are particularly concerned that an EBITDA-based test could stifle new investment in capital-intensive industries including in the energy sector. As noted earlier in this submission, Australia's ongoing economic prosperity is heavily dependent upon these new investments, which in turn are heavily dependent upon globally mobile funding which moves to the jurisdictions offering superior after-tax returns.

The following extract from a July 2010 article by international law firm Clifford Chance, *Tax and global M&A: the changing landscape for deductibility of finance costs on acquisition debt"*, is pertinent:

> *"Governments that introduce these restrictions [on interest deductibility] have to be aware of the delicate balance between revenue raising and stifling inward investment…. If the tax rules become too draconian, inward investment will dry up, affecting corporate taxes and employment and indirect taxes. At worst, existing companies may emigrate. There are plenty of other jurisdictions that are looking to use their tax systems as a tool for encouraging inward investment… in the long term, governments may find that corporate tax receipts diminish."*

Attachment 1

APPEA Membership – Exploration and Production Members

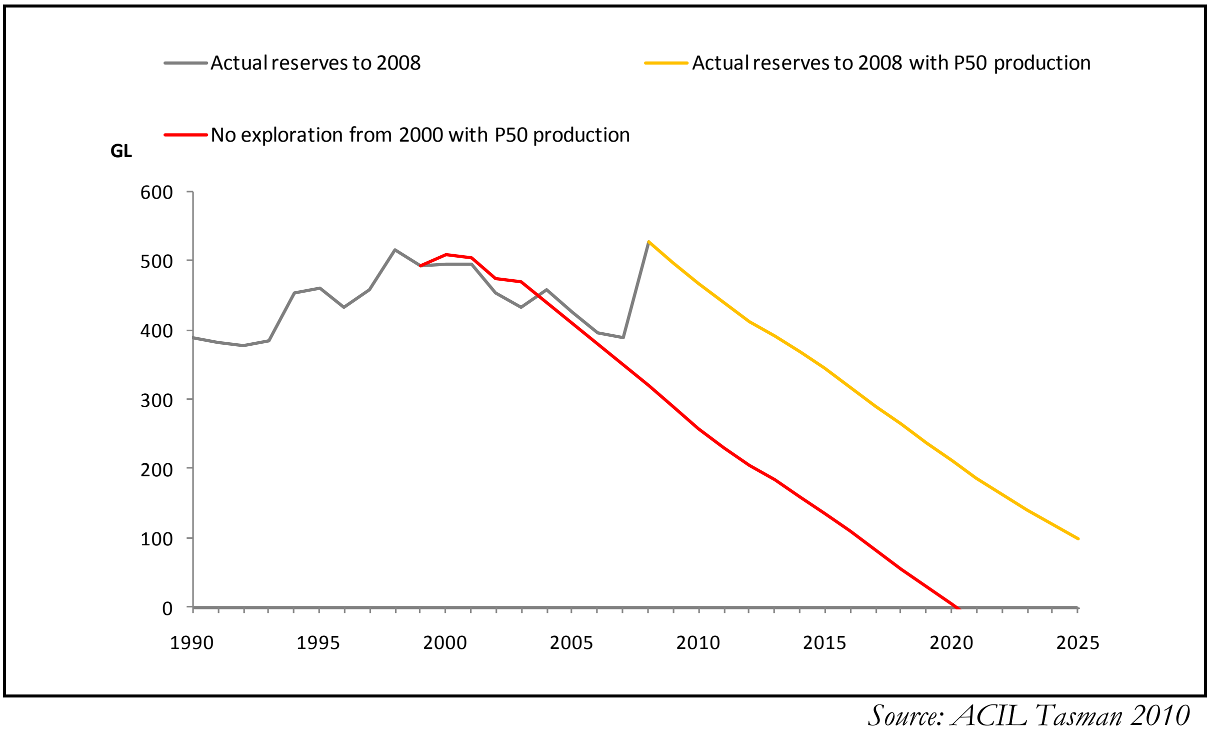
Acer Energy Limited
Advent Energy Ltd
AGL Energy Limited
Apache Energy Limited
Apex Energy NL
Arrow Energy
AWE Limited
Bass Strait Oil Company Limited
Beach Energy Limited
Benaris International NV
Bengal Energy Limited
BHP Billiton Petroleum Limited
Blue Energy Limited
Bounty Oil & Gas NL
BP Developments Australia Pty Ltd
Bridgeport Energy Ltd
Buru Energy Ltd
CalEnergy Resources (Australia) Ltd
Carnarvon Petroleum Ltd
Central Petroleum Limited
Chevron Australia Pty Ltd
Comet Ridge Limited
ConocoPhillips Australia Pty Ltd
Cooper Energy Limited
Cue Energy Resources Limited
Dart Energy Ltd
Drillsearch Energy Limited
Eni Australia Limited
Exoma Energy Limited
ExxonMobil Australia
Falcon Oil & Gas Australia Limited
Finder Exploration Pty Limited
Galilee Energy Limited
GDF Suez Bonaparte Pty Limited
Hess Exploration Australia Pty Ltd
Hindustan Petroleum Corporation Ltd
Hunt Oil Company of Australia
Icon Energy Limited
INPEX
ITOCHU Minerals & Energy of Australia Pty Ltd
Japan Australia LNG (MIMI) Pty Ltd
Japan Energy E&P Australia Pty Ltd
Karoon Gas Australia
KUFPEC Australia Pty Ltd
Lakes Oil N.L.
Larus Energy Limited
Latent Petroleum Pty Ltd

Magellan Petroleum Australia Limited
MEO Australia Limited
Metgasco Limited
Mitsubishi Australia Limited
Mitsui E & P Australia Pty Ltd
Murphy Australia Oil Pty Ltd
Nexus Energy Ltd
Nido Petroleum Limited
Norwest Energy N.L.
Octanex N.L.
Oilex Ltd
OMV Australia Pty Ltd
Origin Energy Limited
Ormil Energy Limited
Osaka Gas Australia Pty Ltd
Pangaea Resources Pty Ltd
Papuan Oil Search Limited
Perenco SE Australia Pty Ltd
Petrel Energy Limited
Petronas Australia Pty Limited
PTTEP Australasia Limited
QGC A BG Group Company
Roc Oil Company Limited
Santos Limited
Senex Energy Limited
Shell Development (Australia) Pty Ltd
Sinopec Oil & Gas Australia Pty Limited
Stanwell Corp Ltd
Strike Energy Limited
Sun Resources NL
Tap Oil Limited
Tokyo Gas Australia Pty Ltd
Tokyo Timor Sea Resources Pty Ltd
Total E&P Australia
Tri-Star Petroleum Company
Triton Petroleum Pte Ltd
Vermilion Oil & Gas
WestSide Corporation
Whicher Range Energy Pty Ltd
Woodside Energy Limited

Attachment 2

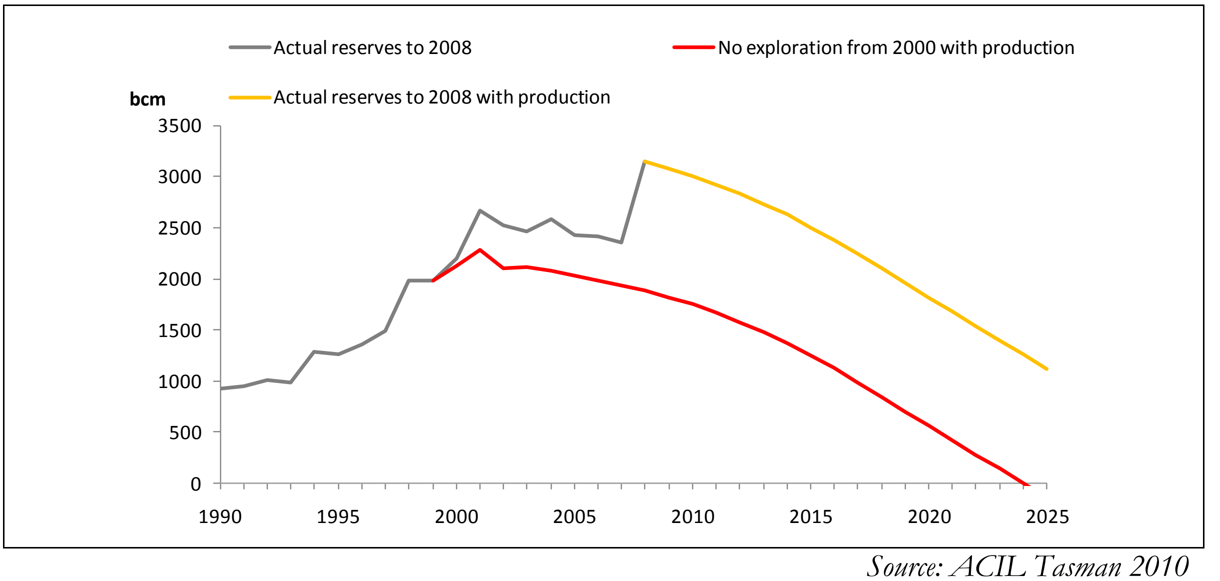
Reserves of Petroleum Liquids and Gas – Simulated Impact of Zero Exploration

Australian Liquids Reserves Projections



Source: ACIL Tasman 2010

Australian Gas Reserves Projections



Source: ACIL Tasman 2010

Attachment 3

Commercial Success Rates – Exploration Wells, Discoveries and Production

Basin	Exploration wells	Discoveries	Producing Discoveries
Adavale	41	2	1
Amadeus	34	10	2
Arafura/Money Shoal	9		
Arckaringa	3		
Arrowie	8		
Bass	33	9	1
Biloeka	1		
Bonaparte	290	66	13
Bowen/Surat	890	216	137
Browse	82	18	
Canning	198	20	6
Capricorn	2		
Carnarvon	594	190	63
Carpentaria	15		
Clarence/Moreton	14	4	
Clarence/Moreton/Ipswich	4		
Cooper/Eromanga	1092	491	295
Cowell	1		
Daly River	1		
Darling	5		
Drummond	2		
Duntroon	6		
Eucla	3		
Fortescue	1		
Galilee	79	1	
Georgina	25	1	
Gippsland	208	62	25
Great Australian Bight	4		
Gunnedah	7	1	1
Herbert/Officer	1		
Ipswich	6	1	
Lachlan Fold Belt	1		
Laura	3		
Maryborough	4	1	
McArthur	21	2	
Moreton	1		
Mulgildie	3		
Murray	14		
Murray/Darling	2		
Nambour	4		
Ngalia	2		
None	6		
Oaklands	2	1	
Officer	17		

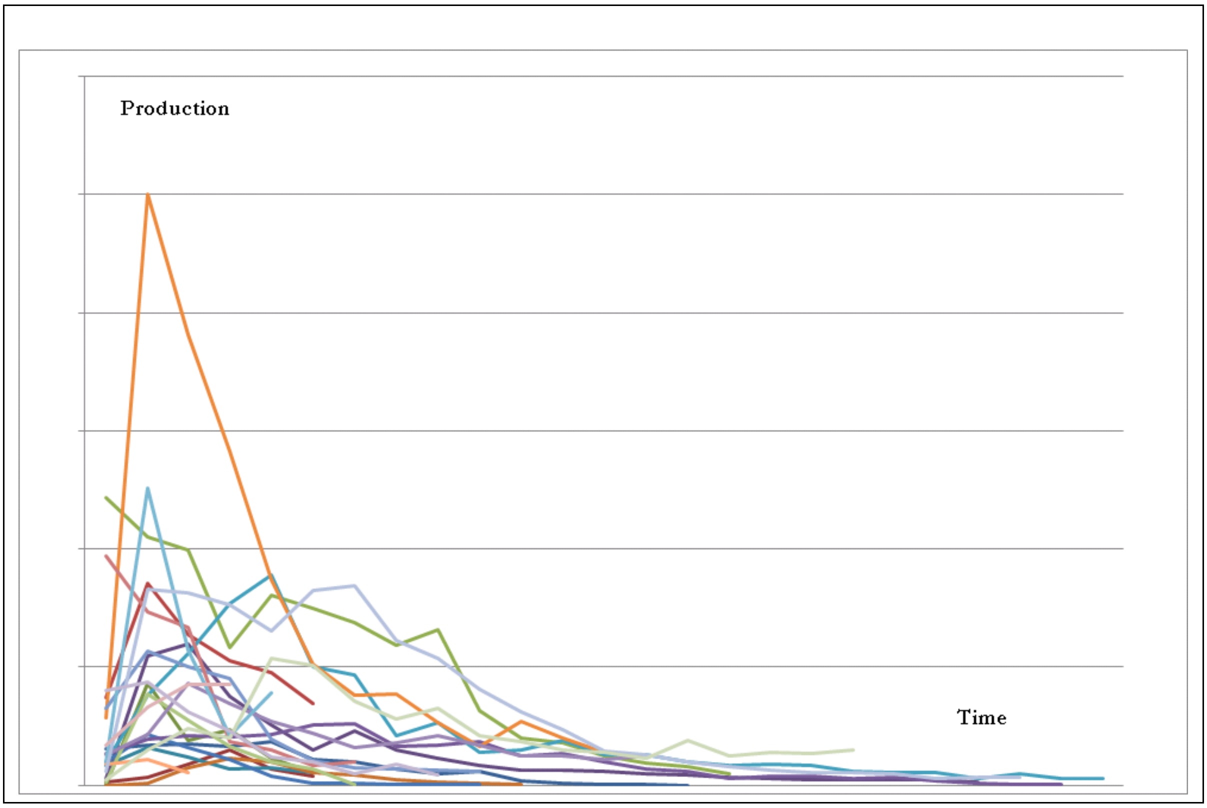
Otway	218	51	22
Pedirka	2		
Perth	175	42	19
Polda	3		
Roebuck	9	1	
Savory	3		
Sorell	3		
Southern Carnarvon	1		
Stansbury	13	1	
Sydney	65	9	
Tamworth	1		
Tasmania	14		
Troubridge	1		
Warrabin	1		

Success Rate		28%	14%
Success Rate (Excluding the Cooper and Carnarvon Basins)		20%	9%

Source: Geoscience Australia

Attachment 4

Production Profiles – Sample Australian Oil Projects



Source: APPEA

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