AUSTRALIAN PETROLEUM PRODUCTION & EXPLORATION ASSOCIATION LIMITED

15 July 2009

The Secretary
Select Committee on Fuel and Energy
The Senate
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Parliament House
Canberra ACT 2600

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Inquiry into Fuel and Energy

Dear Committee Secretary

Please find attached a copy of an additional supplementary submission from the Australian Petroleum Production & Exploration Association (APPEA) Ltd in relation to the Committee's review.

The supplementary submission provides both updated information from that originally contained in our earlier submissions and commentary on the new terms of reference.

Yours faithfully

Belinda Robinson
CHIEF EXECUTIVE

Encl.

- *APPEA Additional Supplementary Submission*

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ADDITIONAL SUPPLEMENTARY SUBMISSION

SENATE SELECT COMMITTEE ON FUEL AND ENERGY

AUSTRALIAN PETROLEUM PRODUCTION & EXPLORATION ASSOCIATION (APPEA) LTD

JULY 2009

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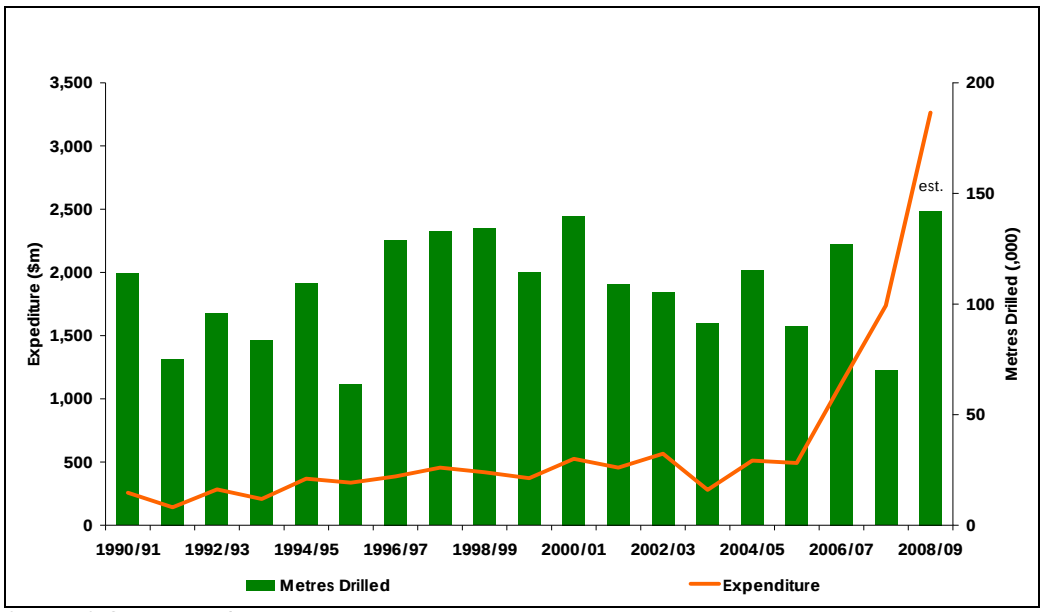
SECTION 1: KEY STATISTICS - UPDATED INFORMATION

As part of APPEA's first submission to the inquiry, a series of data sets and charts were provided to assist the Committee in understanding both the performance of the oil and gas industry and the factors that impact on that performance. APPEA is pleased to provide updated information in a number of the key areas.

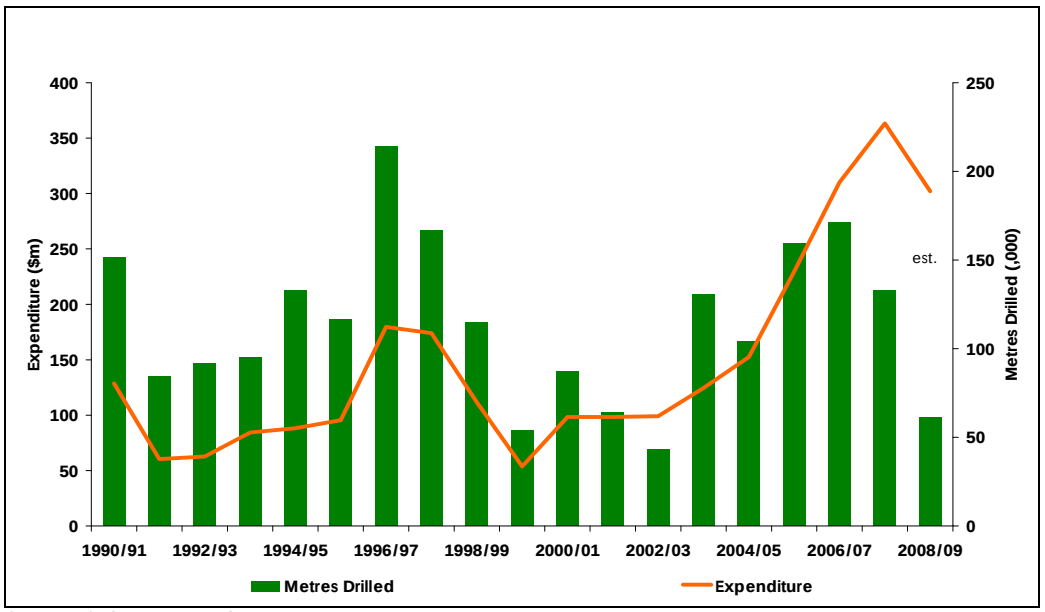
Exploration Activity

Chart 1A: Offshore Exploration Drilling & Drilling Expenditure (1990/91 to 2008/09)



Source: ABS, Geoscience Australia, APPEA

Chart 1B: Onshore Exploration Drilling & Drilling Expenditure (1990/91 to 2008/09)



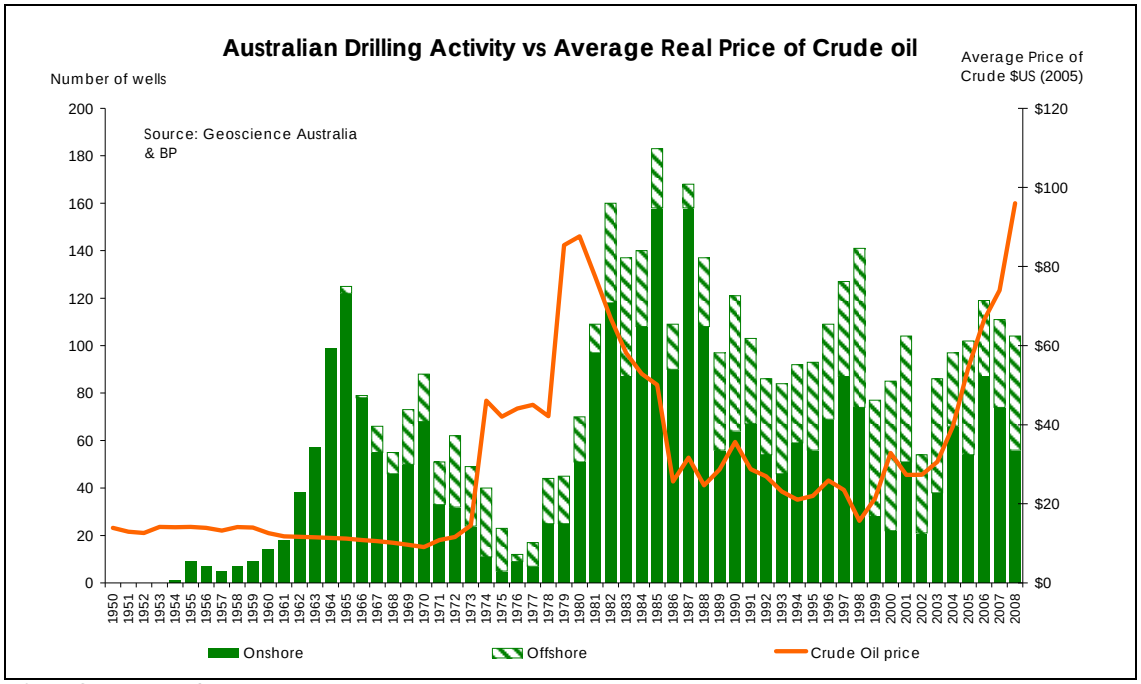
Source: ABS, Geoscience Australia, APPEA

The years 2007-08 and 2008-09 have seen a series of sharp movements in the level of exploration expenditure and the quantum of exploration activity undertaken as measured by the number of metres drilled. For offshore areas, the number of exploration metres drilled rose from 70,000 thousand metres in 2007-08, to nearly 142,000 metres in 2008-09, while total exploration expenditure is forecast to have risen from $1.7 billion to $3.3 billion. These rises are largely attributable to pre-existing work program commitments, the rise in exploration costs recorded over the period and the location of the activity that is undertaken.

For onshore areas, a very different trend has been recorded. The number of metres drilled has fallen from 133,000 metres in 2007-08 to just over 61,000 metres in 2008-09. A fall in exploration expenditure was also recorded, down from $363 million in 2007-08, to a forecast level of around $300 million in 2008-09. These falls reflects the serious challenges that many onshore producers currently face in accessing funding to maintain exploration programs.

An alternate measure of exploration is the number of wells drilled. Chart 2 compares exploration wells drilled with the average crude oil price (in 2005 dollars). While the average oil price rose to around $100 per barrel in 2008, there has been a steady decline in the level of exploration as measured by the number of exploration wells drilled.

Chart 2: Exploration Wells Drilled



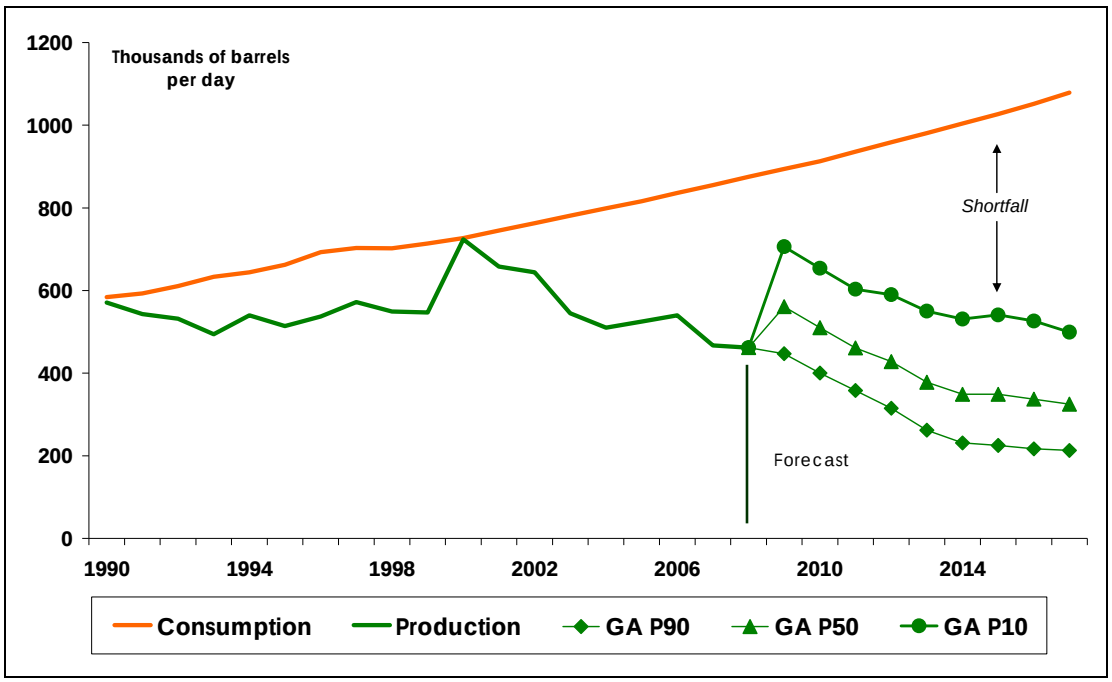
Source: Geoscience Australia, BP, APPEA

Comparing the level of exploration expenditure in Australia (which has rapidly risen in the last three years) with the number of wells drilled (which has steadily fallen) highlights the challenge of needing to maintain a strong exploration effort in an environment of cost increases. As APPEA highlighted in our first submission, while the quantum of expenditure is the most often cited measure of exploration activity, it is arguably the most unrepresentative in terms of the actual level undertaken.

Forecast Crude Oil and Condensate Production

Chart 3 compares historical and forecast crude oil and condensate production with estimated demand. This chart has been updated with new actual levels of production and highlights a slowly declining production profile compared with growing demand. The Geoscience Australia forecasts of future production 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).

Chart 3: Crude Oil and Condensate Production and Demand



Source: ABARE, Geoscience Australia (GA), APPEA

Even assuming the most optimistic supply scenario (P10), petroleum liquids production is expected to fall well short of domestic demand. The impact is already being felt on the balance of payments which is outlined below.

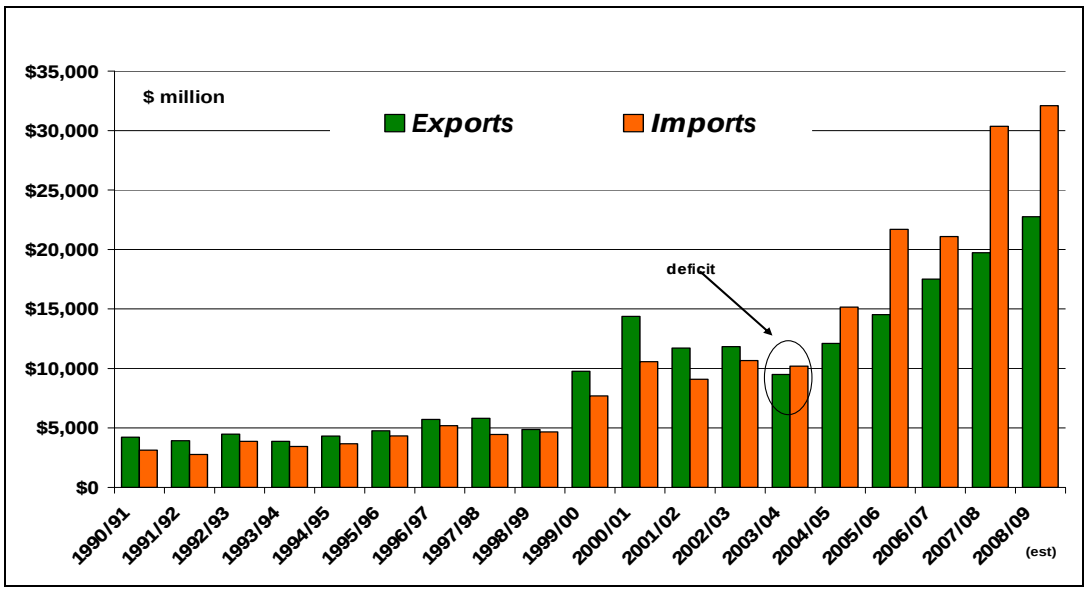
Trade in Petroleum & Products

Australia had traditionally been an exporter of petroleum and petroleum production until the early part of the decade. Not only had this generated valuable export income, domestic production had allowed Australia to replace costly imports of petroleum. There has been a significant turnaround in this surplus position in last five years as a direct consequence of both a rise in international oil prices and a fall in the level of domestic liquids petroleum. The trade deficit that was first recorded in 2003-04 has blown out to more than $10 billion per annum.

Chart 4 includes petroleum liquids (crude oil and condensate), gas (LPG and liquefied natural gas) and petroleum products. The deficit can be expected to rise over the coming years as

petroleum liquids production further falls. A rise in the sale of export gas may assist at least in part in redressing this imbalance, however this deficit is expected to further increase.

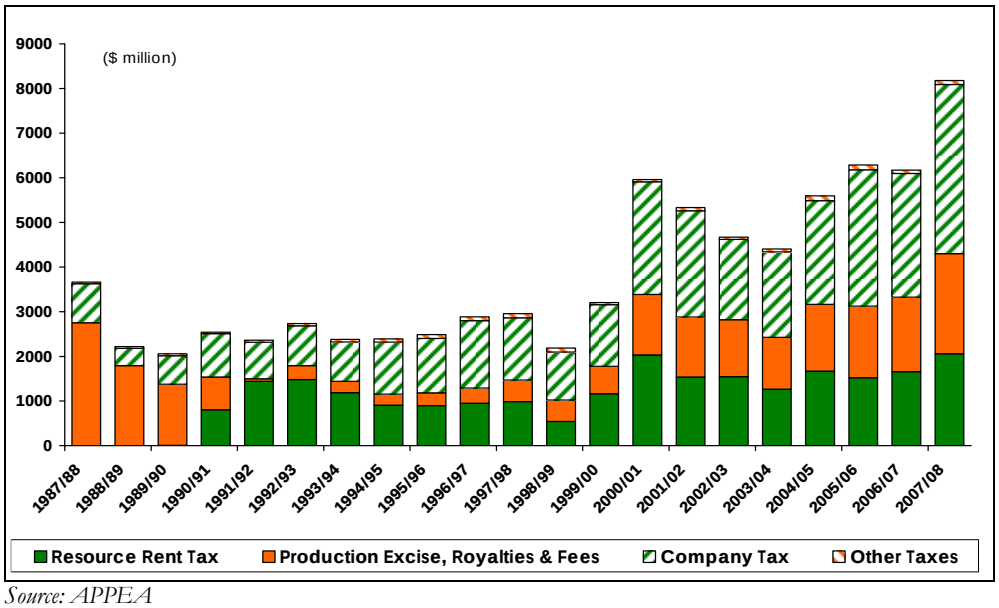
Chart 4: Trade in Petroleum and Petroleum Products



Source: ABARE, APPEA

Industry Expenditures – Taxation Payments and Costs

Chart 5: Industry Taxation Payments



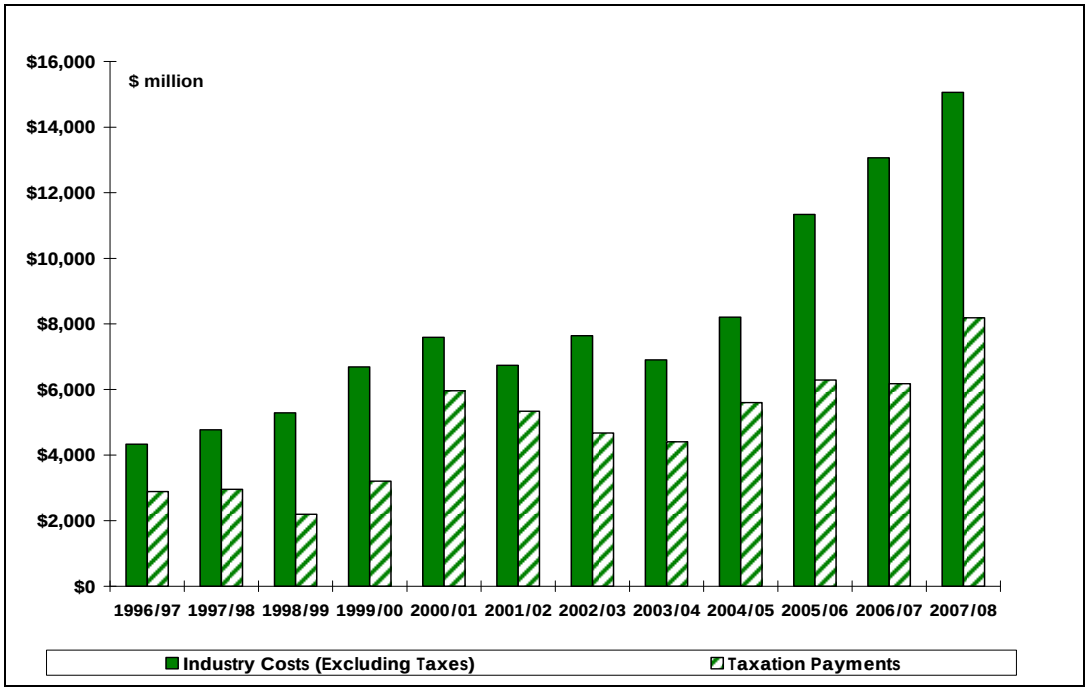
Source: APPEA

In line with the rise in commodity prices that was recorded during 2008, the level of taxation paid by the industry to governments significantly rose above the levels recorded in earlier years (Chart 5). The most significant rises recorded during the period were in relation to company

tax and production excise/petroleum royalties. Overall, it is estimated that the industry paid slightly more than $8.1 billion in taxes, fees and charges during 2007-08, up from $6.1 billion in 2006-07.

During the same period, the industry has also faced a significant rise in the overall level of costs. APPEA Financial Survey data suggest that over the last five years, costs have increased by around 120 per cent (excluding taxes, fees and charges). The change has been reflected in a steady year on year growth as highlighted in Chart 6.

Chart 6: Industry Costs



Source: APPEA Financial Survey

SECTION 2: COMMENTARY

The commentary below supplements the information and recommendations that have previously been forwarded to the Committee. Earlier submissions were lodged on 27 August 2008, 26 September 2008 and 30 January 2009.

2.1 Australia's Natural Gas Resources

There is an opportunity for Australia to generate significant additional national economic, environmental and social benefits from its substantial natural gas reserves including via:

- the creation of a less carbon intensive national electricity market. In contrast to longer-term possibilities around 'low emission' electricity generation technologies, natural gas technologies available today produce 50 to 70 per cent fewer emissions than are produced by current coal technologies in generating electricity
  - according to the Commonwealth Scientific and Industrial Research Organisation (CSIRO), current generation coal fired power stations produce between 800 and 1,300 kg of CO_2 per megawatt hour (MWh) of generation while a combined cycle gas turbine (CCGT) power station produces around 350 to 360 kg/MWh
  - by using more natural gas in power generation, from today, Australia could significantly enhance its ability as a nation to meet our increasing energy needs but at the same time minimising greenhouse gas emissions;
- an expansion of the use of natural gas in resource processing, with consequent reduction in the carbon intensity of the resource processing sector;
- development of alternative transport fuels to enhance supply reliability and lower carbon intensity;
- improvements in energy market security and efficiency, for example, CCGT power station lead times and capital costs are relatively low. This allows for better staging of incremental development to meet demand requirements; and
- development of new chemical industries.

APPEA notes that recent evidence to the Committee has raised concerns about gas supply security in Western Australia and advocated a number of interventionist and inefficient policy responses that would impose significant cost on gas producers in Western Australia and do nothing to increase gas supply security. These and associated issues have been considered in detail in APPEA's recent submission to the Western Australian Office of Energy's Gas Supply and Emergency Management Review. A copy of APPEA's submission to that review is attached.

In terms of Liquefied Natural Gas (LNG), Australia is in a unique position not only to contribute substantially to the economic development of the nation but also to help minimise the growth of greenhouse gas emissions in the Asia-Pacific region. The vast reserves of natural gas located in close proximity to growing Asia-Pacific markets make Australia well-placed to positively assist in meeting the global climate change challenge while substantially contributing to Australia's economic growth.

The greenhouse benefits of LNG as a clean burning fuel source are well established and have long been recognised, including by the Australian Government. For example, in the report,

Australian Liquefied Natural Gas (LNG) – Clean Energy for a Secure Future, the Minister for Resources, Energy and Tourism, the Hon Martin Ferguson AM MP, noted:

> *"The technical, economic and environmental advantages of liquefied natural gas (LNG) have made a global fuel of choice. The Australia, Western Australia and Northern Territory Governments, and the industry, share a vision for a strong, internationally competitive LNG industry."*

For now and for a considerable time into the future, LNG offers a greenhouse advantage in that it is low in emissions compared to other fossil fuels. On a global lifecycle basis, the production, transport and use of LNG generates significantly lower emissions per unit of delivered energy than alternative fossil fuels.

2.2 Regulatory Processes and Reforms

A common theme from many of the surveys comparing risks or attractiveness of petroleum investment around the world is that approvals processes and regulation are frequently cited as the worst aspect of doing business in Australia. The length and complexity of the multi-jurisdictional approvals regime is reducing Australia's competitiveness for investment. This is particularly critical in a time of significantly higher competition for the scarce global capital required to turn around $200-220 billion of drawing board aspirations into reality.

Of the 16 factors affecting investment decisions considered by the 2008 Global Petroleum Survey, the two most frequently cited deterrents to investment in Australia were regulations and processes associated with Aboriginal land claims (50 per cent of respondents) and environmental regulation (43 per cent). In the 2008 World Risk Survey undertaken by the *ResourceStocks* magazine, green tape and land claims were cited as the highest risks facing resources investment in Australia.

The most recent evidence of this is the Fraser Institutes latest Annual Global Petroleum Survey that ranked WA and Victoria in 56th and 57th spot respectively out of 143 countries and states, compared to South Australia (17), the Northern Territory (32), Tasmania (44) and Queensland (49).

In each and every jurisdiction reviews of red tape are taking place. This includes significant reviews in Western Australia, Victoria, and the delivery of the Final Report of the Productivity Commission's study of the regulatory burden faced by Australia's oil and gas industry. All these reviews have identified actions that increase Australia's prosperity through a more cooperative, efficient, outcomes-focussed approach to project approvals.

In spite of this, the possibility exists that this matter will deteriorate further, with indications that a number of additional, costly and duplicative "triggers" (including for greenhouse matters) may be introduced into the Environment Protection and Biodiversity Conservation Act 1999. For these reasons, it is critical that governments take real and urgent steps to reform Australia's regulatory system and ensure that Australia is able to compete unhindered on the global stage for the billions of dollars needed to construct and develop over a dozen new projects currently under consideration, and thus generate up to 50,000 new Australian jobs and an additional $10 billion a year in taxation revenues.

Productivity Commission Review of Regulatory Burden

One critical step towards this urgent reform has already been taken with the delivery in April 2009 of the Final Report of the Productivity Commission's study of the regulatory burden faced by Australia's oil and gas industry. This work has the very real potential for increasing Australia's prosperity through a more cooperative, efficient, outcomes-focussed approach to regulation and project approvals.

In its Final Report, the Commission found that current regulatory arrangements for the industry are complex, impose unnecessary regulatory burdens and increase costs. The focus of the Commission's report is on measures that have the potential to reduce unnecessary burdens on the upstream oil and gas industry – being those regulatory burdens that can be removed without compromising desirable outcomes, such as relating to resource management, the environment, heritage, development, land access and occupational health and safety.

Significantly the Commission believes that a 50 per cent reduction in approval times is achievable and estimates that a one year reduction in total approval time for major projects could generate future national income gains in the billions of dollars each year.

The Commission's report identifies significant unnecessary costs from delays and uncertainties in obtaining approvals, duplication of compliance requirements, and inconsistent administration of regulatory processes. The Commission found that:

> "… *these burdens could be reduced through new institutional arrangements – principally the establishment of a national offshore regulator – as well as implementation of best practice regulatory principles in all jurisdictions*."

While the Commission's report noted that compliance costs for the industry are large and in the millions of dollars for each project, it was the time taken for approvals that imposed the greatest burden on the industry.

> *"Delays impose far more significant burdens, because they can increase project costs, reduce flexibility in responding to market conditions, impeded financing of projects, and defer production and revenues."*

The Commission's Report identified a raft of opportunities for streamlining regulatory approvals, providing clear timeframes and removing duplication between jurisdictions. The adoption of many of these suggestions across Australia's onshore and offshore jurisdictions would result in a more effective and efficient management of Australia's hydrocarbon resources in accordance with the interests of the nation and ensure the significant potential for growth of this industry are realised.

The Commission's Report also identified significant efficiencies that could be made through establishing a new national offshore petroleum regulator to undertake resource management, pipeline and environmental regulation in Commonwealth and State and Territory (coastal) waters. These are currently being considered by the industry.

APPEA considers that governments at all levels need to urgently address the Productivity Commission's recommendations and establish a firm and agreed work program for their implementation.

Independent Review of the EPBC Act

Adding even further weight to the industry's call for urgent regulation reform is the recent release of the interim report into the Commonwealth's *Environment Protection and Biodiversity Conservation Act.* The interim report found '*there is no doubt that there is duplication in the regulation of upstream petroleum related activities insofar as they relate to management of impacts on the environment. There is a need to minimise this regulatory overburden for its own sake as well as in having regard to the Government's policy of deregulation'.*

The Interim Report reinforces the findings of the recent Productivity Commission report that Australia's upstream oil and gas industry is groaning under the dead weight of regulatory inefficiency. APPEA supports the report's inclination to resist the incorporation of a greenhouse gas trigger into the EPBC where there is a CPRS in place. The report states:

> *'There may be an argument for a greenhouse trigger where there is no price signal, for example emissions from native vegetation clearance. However, if a CPRS is introduced in the relatively near future, this review would not support the creation of a broad based greenhouse gas trigger'.*

Ending the Era of Review

While most can generally agree on the fact that removing superfluous duplicative red tape is a great idea, the challenge seems to be in actually pulling out the red pen and taking real action to remove the myriad of duplicative provisions. Regulation reform is no small task, but APPEA believes that early and substantial headway could be made by implementing the following.

1. Reducing the Offshore Petroleum Regulations down from existing 13 duplicative regulations covering all things imaginable into 3 simpler and streamlined regulations for resource management, environment and safety.
2. Introducing a primary point of contact regulator to facilitate and have ownership of the approval process as is undertaken by PIRSA in South Australia. This could ensure someone in government has ownership of the approval processes and reduces the government interfaces down from over 20 regulatory agencies.
3. Granting major project facilitation to more of the industry's projects, as is currently the case in Queensland, providing regulators additional resources to fast track the development of projects of state and national significance.
4. To provide greater recognition under the EPBC Act for the day to day regulation of routine exploration and preliminary investigation activities by existing Commonwealth and State Ministerial approvals.

While improving multi-jurisdictional approvals is important, given many projects only operate in one jurisdiction and major facilities are typically located in State jurisdictions, it is equally important that State Government approvals be designed and implemented to promote community wellbeing without imposing unnecessary regulatory burdens. Over the past year several other reviews of approvals processes in Western Australia, Queensland, South Australia, the Northern Territory and Victoria have been completed or initiated.

The recommendations and outcomes of the Productivity Commission's review for instance do not just fall to the Commonwealth. An inclusive process that includes the Commonwealth, the States and Territory, and the industry, will result in a better outcome for the industry, and

a substantially better outcome for the nation with Australia in a great position to compete unhindered on the global stage for the almost $200 billion needed to construct, develop and operate this strategically important and growing industry.

With the release of a myriad of regulation reviews, governments and industry have long been aware of Australia's regulation problems. It is now time for action on regulation reform. It is now time to make Australia an attractive destination and allow the industry to compete on the global stage for the almost $200 billion needed to construct, develop and operate this strategically important and growing industry.

2.3 Enhancing the Fiscal Framework

APPEA commented in length on a number of fiscal challenges that confront the industry in our first submission to the Committee. We would like to reiterate our earlier comments and provide some updated information.

The taxation framework that covers activities undertaken in the petroleum industry in Australia is varied. Income tax applies, all petroleum (oil and gas) production is subject to resource taxation and a myriad of indirect taxes also apply to the industry's activities. The tax system plays a key role in shaping investment decisions in the industry. Data presented above indicated that taxation makes up more than a third of the total costs incurred by the industry ($8.1 billion out of a total cost base of $23.2 billion for the year 2007-08).

An internationally competitive fiscal regime is crucial to increasing Australia's share of global exploration activity, facilitating the development of new projects and extending the productive lives of mature developments. Modifications to taxation settings may not alone lead to changes in project decisions, however competitive fiscal terms improve the overall decision making framework. Fiscal policy is one of the few policy instruments within the control of governments that can be used to encourage exploration and/or development activity. In terms of Australian gas projects, the lower returns, long lead times and high risks associated with such activities particularly lend themselves to improvements through taxation changes.

The results of a number of independent studies were canvassed in our first submission. Since that time PricewaterhouseCoopers has undertaken a comprehensive global analysis into key aspects of income tax regimes world wide on corporate activities. The review, which was conducted as part of the World Bank's 'Doing Business' project, covered 181 countries and measured the following:

- 'ease of paying'
- the number of tax payments made during a year
- time required to comply
- the total tax rate

Total Tax Rate (percentage of commercial profits) – Selected Gas Producing Countries

Country	Overall Ranking
Qatar	3rd
UAE	4th
Saudi Arabia	6th
Oman	15th

Nigeria	39th
Trinidad & Tobago	43rd
Malaysia	53rd
Indonesia	72nd
Brunei	73rd
Norway	88th
Papua New Guinea	89th
United States	92nd
Egypt	109th
Australia	**127th**
Algeria	167th

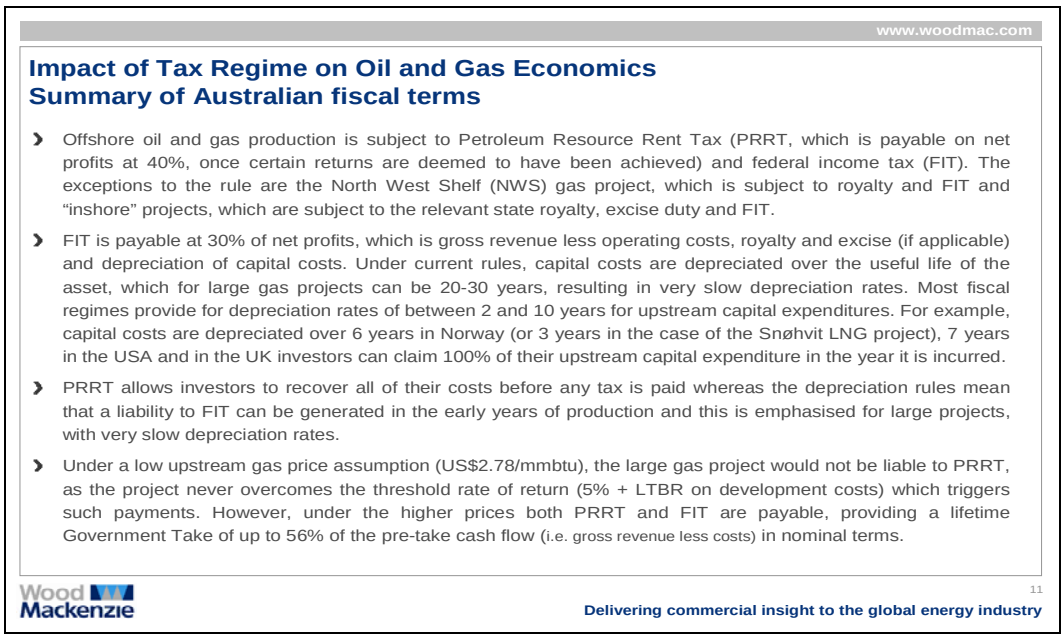
Source: PricewaterhouseCoopers, "Paying Taxes 2009 – The global picture"

The rankings are based on a generic business case study that was prepared and applied to each tax paying jurisdiction. Australia performed relatively well in the first three measures (ranking 68th, 33rd and 25th respectively), however when measured on a total tax rate basis (as a percentage of commercial profits), Australia ranked 127th. This result is even worse when Australia is compared directly with other gas producing countries – under this scenario, Australia ranks second last.

It is important to note that 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 Ltd examined the reasons why many of Australia's gas projects had not been developed. They concluded 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."*

A further report was commissioned by a number of APPEA member companies in late 2008 to provide an up to date snap shot of the impact of current fiscal terms on oil and gas economics in Australia. The summary slide below provides some key conclusions.



Source: Wood Mackenzie, 2008

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

APPEA has consistently advocated a series of reforms to the fiscal framework that we consider will improve the exploration and development framework, therefore assisting Australia in unlocking the economic potential of the nation's petroleum resources. The reforms are broadly as follows:

- substantial modifications to the income tax regime as it applies to natural gas projects in Australia. This could be achieved through a major reduction in the length of asset lives for depreciation or through the introduction of an investment allowance under the income tax regime. A three year write-off period for all plant associated with natural gas production, liquefaction activities and related greenhouse gas abatement processes would be one such approach;
- an adjustment to the company tax regime to allow eligible entities to transfer exploration deductions to shareholders via the introduction of a tax credit or similar mechanism. Such a scheme could be quarantined to small eligible exploration entities and be implemented via a flow through share regime; and
- introduction of an investment allowance deduction under the company tax regime for petroleum exploration in nominated frontier areas at a rate of 175 per cent of eligible exploration expenditures.

2.4 The Benefits of Unlocking our Petroleum Potential

The domestic natural gas supply industry makes a fundamental contribution to the Australian economy. Among the national benefits are:

- reliable, clean, efficient energy supplies for households and industry;

- an impetus for regional development significant flow-on benefits to the economy via a substantial ancillary services sector;
- the production of associated liquids, that constitute a valuable supply to petrochemicals, LPG and refined petroleum products markets;
- significant company taxation revenue; and
- significant resource taxation revenues.

According to the Australian Bureau of Agricultural and Resource Economics (ABARE), natural gas currently accounts for about 20 per cent of primary energy consumption in Australia; this is predicted to grow to 25 per cent by 2029-30. At present about 15 per cent of Australia's national electricity generation comes from natural gas; this is predicted to grow to about 24 per cent by 2029-30.

Looking out over the next decade, reaching the aspirational targets established through *Platform for Prosperity*, would have significant economic and social benefits for Australia. Economic modelling commissioned from economic consultants CRA International and conducted by Access Economics utilising their Access Economics General Equilibrium Model (AE-GEM) shows that if Australia achieves the aspirational targets set out in *Platform for Prosperity* over the period to 2017, then we can expect:

- an increase of between $13 billion and $55 billion in GDP in net present value terms that is equivalent to adding between 0.24 and 0.31 percentage points to Australian GDP growth in 2017;
- an increase in real consumption of between $500 million and $21 billion in net present value terms over the period to 2017;
- an increase in Australian exports leading to an improvement in our trade balance of $1.6 billion by 2017;
- the generation of new jobs in the oil and natural gas and construction industries – in 2012 at the height of the construction boom expected to be associated with the strategy 52,000 new jobs will be generated;
- the diversification of Australia's energy economy with increased penetration of natural gas in the domestic manufacturing industry; and
- a major boost to remote regional economies particularly in Western Australia, Queensland and the Northern Territory.