

Platform for Prosperity

Australian Upstream Oil and Gas Industry Strategy

JANUARY 2008

The upstream oil and gas industry contributes significantly to Australia's energy security, jobs and wealth for this paper and the on the upstream p the importance of sources cannot be petroleum account Australia's primary coal 41% and renewable share and in the long term energy, hydro nuclear energy market. However, for at least oil, gas and coal will Australia's energy oil and gas industry significantly to meet energy needs as well as jobs and wealth for





Preface

On 16 April 2007 the Australian Petroleum Production and Exploration Association (APPEA) released a Strategic Leaders' Report for the Upstream Oil and Gas Industry Strategy.

The strategy aims:

To ensure the value of Australia's oil and gas resources to the Australian people is maximised, petroleum energy security delivered and long-term sustainability of an Australian oil and gas industry assured.

Prepared by APPEA with the assistance of the Australian and state and territory governments, Geoscience Australia, CSIRO and other major stakeholders, the Strategic Leaders' Report (SLR) identifies the opportunities and challenges facing the Australian oil and gas industry, the issues that could prevent the opportunities from being fully realised, and the options for addressing those issues. It shares a vision for the future of the industry and suggested initiatives and changes that could be adopted by governments, the industry and other stakeholders to help achieve that vision.

Since its inception, the 65 options listed in the SLR have been further considered by a joint government-industry implementation group (see Appendix A for a list of members). This group is responsible for overseeing the implementation of options which have been agreed by governments and/or industry and for further developing options which are still under discussion.

This Implementation Report describes, as at 1 January 2008, the implementation status of the options proposed in the SLR, focusing in particular on the seven high value-adding priorities identified in Chapter 2. Good progress has been made in many areas and a number of important initiatives have already been implemented or are well advanced. A small number of options, not considered to be practical or necessary to the achievement of the strategy's goals, have been deleted. In other cases, including some high-value options, only limited progress has been made although discussions are continuing.

It is anticipated that this will be the first of a series of annual implementation reports since some options require input into longer-term government policy development processes or comprise a series of actions which will take some time to complete. In addition, it is inevitable that over time, new issues and priorities relevant to the achievement of the strategy's vision and targets, will also arise and will need to be accommodated within the implementation process.

For further information about the Upstream Oil and Gas Industry Strategy and for copies of the Strategic Leaders' Report and the preceding issues paper, readers should consult the APPEA website: www.appea.com.au

Contents

Summary	1
Context	3
2.1 Vision	3
2.2 Targets	3
2.3 Benefits to Australia	3
Progress on high value-adding priorities	4
3.1 An improved fiscal framework for gas projects	4
3.2 An improved framework for exploration	5
3.3 More consistent and more efficient approvals and regulatory regime for petroleum exploration, development and operations	7
3.4 Harnessing the environmental benefits of gas	8
3.5 Continuously improving environmental and safety performance and increasing community awareness of the industry's performance and values	10
3.6 Improving and better coordinating research and development	12
3.7 Implementing a national petroleum skills and vocational training plan	13
Appendix A Australian Upstream Oil and Gas Industry Strategy Implementation Group Members	15
Appendix B Key initiatives and options	16
Appendix C Options status—actions completed and outstanding	17

1 Summary

Table 1: Progress by industry and governments on key priorities as at 1 January 2008

Priority	Progress to date	Comment
Safety management	**** Excellent progress on a number of fronts.	Numerous initiatives implemented or are well advanced. The active engagement of all stakeholders from health and safety representatives to CEOs and regulators is fostering increased cooperation and a joint approach to new initiatives. Outcomes and continuity yet to be assessed.
Implementing a national petroleum skills and vocational training plan.	*** Significant progress in key areas.	Government funding has been secured to develop programs for increasing female, Indigenous and mature-age worker participation. Several training and information programs are being expanded. However, important proposals for setting industry targets and increasing company support have yet to be finalised.
An improved framework for exploration	*** Good progress towards achieving high-value outcomes.	Industry and departments are working closely to develop a new package of measures for frontier exploration. However, this is subject to budgetary processes and yet to be agreed by government.
Environmental management	** Continually improving but still struggling to gain recognition by the community and regulators.	New initiatives are underway in Information sharing, reporting, oil spill response and environmental research. Industry-government discussions on principles for good environmental management have been initiated but are yet to be applied consistently and reflected in regulatory requirements.
More consistent and more efficient national approvals and regulatory regime for petroleum exploration, development and operations	** Several reviews have been initiated or are planned but few, if any, changes have been implemented to date.	A Productivity Commission review of approvals and regulatory processes has been discussed by the Ministerial Council on Mineral and Petroleum Resources, but has yet to be agreed by all jurisdictions. Substantial progress is being made in streamlining some offshore petroleum regulations (for pipelines, wells and consents) and some states have initiated reviews of approvals processes (including a review by the WA Auditor General).
Harnessing the environmental benefits of gas	** Pluses and minuses	While the views of industry are being taken into account in some areas (for example, emissions trading design), policies to increase renewable energy targets are contrary to the industry's strong opposition to policies that distort fuel-on-fuel competition and undermine the integrity of an emissions trading scheme.
Improving and better coordinating research	* Progress in some areas but the main priority (a capability study to be commissioned by the industry) has not commenced.	While several mechanisms for better managing joint research projects have been considered, progress is yet to be made on developing a national framework as proposed in the Strategic Leaders' Report.
An improved fiscal framework for gas projects	* Good discussions but little effective progress.	Although further discussions have been held with departments and the government, no agreement has been reached on fiscal changes.

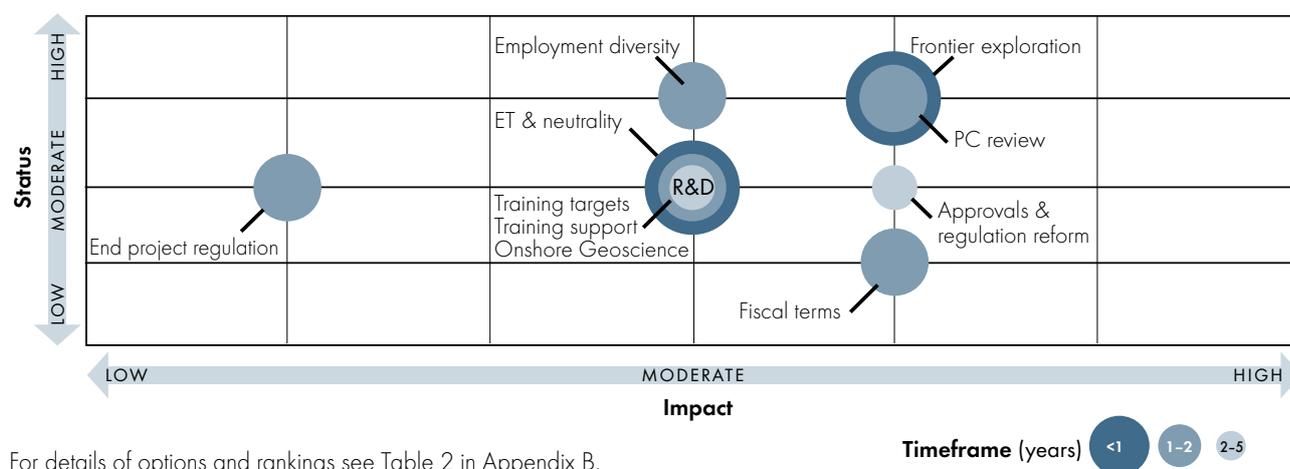
Since the release of the Strategic Leaders' Report, significant progress has been made in further developing and implementing many of the 65 options for addressing impediments to the growth of Australia's oil and gas industry. Some options were able to be agreed and completed relatively quickly, but others are either in the process of being implemented, or where significant policy changes are required, are the subject of ongoing discussions between the industry and government.

Table 1 ranks the progress made by the beginning of 2008 towards implementing options related to the key priority areas

identified in the Strategic Leaders' Report. The ranking varies from a single star where progress is yet to be made up to five stars for priorities that have been fully implemented by either governments, industry or collaboratively (none in that category as yet).

At a more detailed level, the strategy's implementation status can also be assessed by considering the status of high value-adding options grouped into key initiatives. Figure 1 groups options in such a way and ranks each group according to their potential impact in helping to meet the strategy's growth targets, the timeframe for the impact to be realised and their implementation status.

Figure 1: High value-adding initiatives



For details of options and rankings see Table 2 in Appendix B.

As indicated in Figure 1 substantial progress is being made on several issues including those seeking to address skills shortages by increasing employment diversity, improving the incentives for frontier exploration and initiating a Productivity Commission review of regulation. None of the initiatives have yet reached the stage of attaining a score of 4 on the status scale (all options moving forward with the support of industry and governments) but several could be close to achieving a status of 4 by the end of 2008.

A number of high-impact initiatives are in the lower half of the diagram as either stalled or progressing slowly. Fiscal terms for gas projects ranks lowest in terms of progress to date even though it ranks highest on impact and could start delivering benefits within 1-2 years. The federal election campaign during the latter part of 2007 caused a delay in progress. The industry and the new government will continue to discuss the issue and monitor information to underpin the proposal.

Other areas where progress is slow relate to:

- approvals and regulation reform (to a degree dependant on the outcome of the Productivity Commission review and relevant state/NT review processes)
- industry action to address skills shortages through target setting and support for training programs

- increasing state/NT government investment in onshore geoscience information collection
- collaborative leadership on developing a national petroleum R&D framework
- greenhouse policies driven by principles of least cost abatement and competitive neutrality.

These areas will need to be given priority in 2008 together with the implementation of measures supporting frontier exploration and completion of stage 1 of the National Skills Shortages Strategy Project to increase employment diversity and skills availability.

Although not discussed in detail in the SLR, two issues relevant to the strategy's targets will also require greater attention during 2008, namely:

- government and industry response to concerns about gas supply security, particularly in the Western Australian domestic gas market
- government initiatives to improve the planning and delivery of infrastructure to support frontier exploration and oil, gas and other industrial development in regional areas.

2 Context

2.1 Vision

The Upstream Oil and Gas Industry Strategy is based on a vision and set of targets for the industry to aspire to over the next ten years to 2017.

The vision is that:

In 2017 the upstream oil and gas industry is recognised as a vibrant, innovative, safe and responsible industry, producing reliable, clean energy and substantial wealth for Australia.

2.2 Targets¹

In the decade to 2017:

- Oil and condensate production as a proportion of liquid fuels consumption is, on average, maintained at the 2006 level of 57 per cent or better.
- LNG production capacity increases from 20 million tonnes a year in 2008 to at least 50 million tonnes a year.
- Natural gas use for industrial purposes and as a competitive feedstock for resources processing doubles.
- In a competitive electricity market, 70 per cent of all new electricity generation capacity installed in Australia is gas fired.

2.3 Benefits to Australia

Implementation of the options identified in the Strategic Leaders' Report and achievement of the strategy's targets would generate major benefits for Australia including:

- A potential quantum improvement in the balance of trade—an extra \$20 billion a year by 2017.
- Lower greenhouse gas emissions—180 million tonnes per annum of carbon dioxide equivalent avoided globally by 2017 (equivalent to more than one quarter of Australia's projected greenhouse gas emissions in 2017).
- Greater energy supply security.
- Increased revenue to governments—billions of dollars a year. A single new LNG project for example, could pay \$40 billion (nominal dollars) in tax and royalties over a typical project life.
- A more skilled workforce and increased employment in the oil and gas sector and service industries (up to 52,000 new jobs at the peak).
- Increased regional development, particularly in WA, Queensland and NT.
- Develop Australia as a leading gas research centre.
- Reduced water usage in electricity generation (gas fired electricity uses one half to one sixth the water needed for coal fired electricity).

¹ For further detail see Chapter 1: A vision for the future, of the Strategic Leaders' Report.

3 Progress on high value-adding priorities

This chapter reviews progress on the seven high value-adding priorities identified in Section 2 of the Strategic Leaders' Report (SLR). Within each priority, the key options with the greatest impact and requiring policy changes or new initiatives are restated (as per Chapter 6 of the SLR). Background information is then provided before reviewing actions to date and the anticipated way forward.

Progress to date is summarised by a star rating from one star (ongoing discussion but little progress towards implementation) up to five stars (implementation completed) as used in Table 1 of the summary.

Of the remaining options, some have already been implemented and some have been deleted from further consideration as being impractical or not contributing to the achievement of the strategy's objectives. The remainder are being progressed by APPEA's policy committees through established avenues of communication with governments and other stakeholders. Progress on these options is briefly reviewed in the following sections of this chapter.

For further details on the status of all of the SLR's 65 options see Appendix C.

3.1 An improved fiscal framework for gas projects

KEY OPTIONS

- 2.1.1 Implement key adjustments to the company tax regime to reduce the distortionary impact of income tax on the economics of gas projects. Under the existing provisions, gas developments generally incur a tax liability prior to generating a risk-adjusted return on invested funds. Reform could be achieved through the application of a five-year write-off under the depreciation regime. Such a reform would also have the opportunity of achieving significant greenhouse-related benefits by encouraging the development of a suite of new gas-based projects.

BACKGROUND

The industry considers that changes to the fiscal framework are needed to make it more responsive to the economic factors affecting investment in high cost, long life gas projects and to improve its global competitiveness. The industry advocates a five-year company tax depreciation regime on the basis that Australia's capital depreciation write-off periods of 15 to 20 years for gas projects cannot compete with the five- to 10-year write-off periods generally available to gas projects overseas. Long construction lead times, high costs, low domestic gas prices and flat revenue flows have a major impact on project economics. The industry believes that five-year depreciation would help to overcome this disadvantage.

Project modelling undertaken for the SLR indicates that income and resource taxes paid by a two train LNG project could

account for 64 per cent of the project's total pre-tax returns. Income and resource tax payments could total \$40 billion over a 27 year project life or \$5 billion in discounted net present value (NPV) terms (assuming a 10 per cent real discount rate). The provision of 5-year income tax depreciation would increase the project rate of return from 11.8 per cent to 12.2 per cent by increasing the project's after tax NPV by \$540 million. However, tax payments would still be significant and still account for more than half (57%) of the project's total pre-tax returns. In undiscounted terms there would be little change since a change to depreciation periods only changes the timing of tax payments (not the total). The SLR concluded that the cost to government revenue would be less than the \$540 million benefit to the project proponents since governments would typically use a lower discount rate than 10 per cent real.

ACTION TO DATE (*)

Since the release of the SLR members of the industry and the Department of Resources, Energy and Tourism have held further discussions about the proposed change to depreciation terms for gas projects. However, all government officials are yet to be convinced of the value in changing depreciation terms for gas projects. It is argued that fiscal terms are only one factor affecting investment decisions and improvement to fiscal terms alone would not necessarily cause projects to proceed earlier than would otherwise be the case. Concern has also been expressed by government officials about the potential inconsistencies in the company tax terms between industries should a shortened depreciation period be introduced.

Government officials have agreed to further discussions and have been provided with additional information including the potential loss to government revenue of deferred investment decisions.

WAY FORWARD

This issue will be raised as a priority in early 2008. Meanwhile individual project proponents continue to have the option of making their own representations to government agencies, particularly if they can demonstrate that changes to fiscal terms would positively impact on project timing and viability.

3.2 An improved framework for exploration

KEY OPTIONS

- 1.1.5 Expand support for onshore pre-competitive geoscience initiatives so as to stimulate greater interest in onshore frontier basins.
Develop a package of measures for increasing frontier exploration. Measures could include:
 - 1.2.1 ■ A broader definition of 'frontier acreage' which includes conceptual definitions of 'frontier' –including geographical or geological criteria-and increase the availability of incentives to a greater number of areas onshore and offshore.
 - 1.2.2/ ■ Mechanisms additional to existing permit and fiscal terms that will encourage petroleum exploration in remote and frontier areas (such as increased company tax write-off rates for exploration expenses).
 - 1.2.3
 - 1.2.4 ■ States/NT to review and improve incentives for onshore frontier exploration.
 - 1.2.6 ■ Systems such as flow through shares to improve access to capital for junior participants in both onshore and offshore exploration.
 - 1.4.1 ■ Develop processes for faster cycling of acreage.

BACKGROUND

A strong internationally-competitive exploration sector is crucial to the long-term future of Australia's oil and gas industry and to the achievement of its vision of producing reliable, clean energy and substantial wealth for Australia. To achieve the strategy's production targets, the SLR proposed the following targets for exploration:

- Increase Australia's share of global exploration expenditure, with increased exploration in both known provinces and onshore and offshore frontier areas.
- Drill at least 40 wells in Australia's offshore frontier basins and 100 wells in onshore frontier basins during the next decade—compared with 12 offshore and 26 onshore frontier wells drilled from 1997 to 2006—in addition to coal-seam methane drilling.
- Double Australia's known 2P (proved plus probable) oil reserves as at 2006 and discover at least one new oil and gas province.
- Expand gas reserves—including coal-seam methane—to reassure the domestic energy market of long-term supply security.
- Become one of the top five most attractive locations globally for oil and gas exploration and development investment.

Recent evidence suggests that higher oil and gas prices and a buoyant LNG market are stimulating increased interest in exploration acreage and higher exploration spending commitments in acreage bids, particularly in offshore areas around known petroleum provinces. However, the real challenge is to greatly increase exploration in onshore and offshore frontier areas. At present, only 17 per cent of Australia's offshore sedimentary basins and 26 per cent of potentially prospective onshore basins are covered by petroleum permits, so we simply do not know what resources remain to be discovered.

Offsetting the advantage of enormous unexplored potential are Australia's disadvantages in the form of a reputation for low oil prospectivity, high rig mobilisation costs and concerns about approvals processes. Indeed, much of the recent increase in exploration expenditure is due to increases in costs. These factors need to be recognised and offset by enhanced fiscal terms for high-risk, high-cost frontier exploration, including a recognition of the issues confronting junior exploration companies. An enhanced deduction under the company tax regime for frontier exploration and the introduction of flow-through shares are two possible mechanisms.

The availability of high quality pre-competitive geoscience research and data is one of the country's competitive strengths. However, this effort needs to be maintained and in some onshore jurisdictions strengthened. The states and the Northern Territory also need to consider other incentives for onshore frontier exploration and make meaningful reforms to unnecessarily time consuming and onerous approvals processes.

ACTION TO DATE (* * *)

The industry, the Department of Resources, Energy and Tourism and Geoscience Australia are working closely to develop a package of measures for enhancing frontier exploration in both onshore and offshore areas. It is proposed these will replace and improve upon the frontier incentive introduced in 2004 which provided for a 150 per cent Petroleum Resource Rent Tax deduction for exploration expenditure in designated frontier areas and which is due to expire in 2008.

The key options listed above are being considered in the discussions with priority being given to implementing a broader definition of 'frontier acreage', enhanced fiscal incentives (particularly for non-PRRT paying companies) and improvements to acreage release processes.

The need for improved incentives for onshore frontier exploration has also been raised with the states/NT through the officials groups under the Ministerial Council on Mineral and Petroleum Resources (MCMPR). There is no evidence as yet of this leading to any new initiatives although some jurisdictions, particularly Western Australia, are considering options for incentivising onshore frontier exploration in response to concerns about long-term gas supply security.

APPEA and Geoscience Australia have commissioned a report on the value and importance of pre-competitive geoscience to stimulate exploration in frontier areas. The report will include case studies from various offshore and onshore programs and will be used to support the case for increased geoscience funding for geological surveys in federal, state and territory jurisdictions. This report is due to be released in early 2008.

Progress with other options

Option 1.3.1 (concerning oil vs gas title terms) was not considered feasible or greatly contributing to the strategy objectives so has been deleted from further consideration.

Options 1.1.1, 1.1.2 and 1.1.3 concerning the national coordination of research and data management are to be considered by industry and government through the APPEA Data Working Group and Petroleum Data Consultative Group (next meeting has been deferred to 2008).

Through ongoing processes, APPEA will continue to input into data acquisition programs by Geoscience Australia (option 1.1.4) and government policy on multiple land use (option 1.5.2). Technology requirements for the services sector (option 1.2.5) will form part of the assessment of research needs, and coordination for the oil and gas industry generally (options 8.1.1 and 8.1.2 reviewed in section 3.6 below).

A preliminary workshop was held in October at which Commonwealth, state and territory governments and APPEA considered the possibility of an expedited and standardised Native Title process (option 1.5.1). Work has commenced through the MCMPR's Upstream Petroleum and Geothermal Sub-committee (UPGS) on guidelines for the development of Native Title agreements. While the model approach may not readily be acceptable to all jurisdictions due to legislative and legal constraints, there is now agreement to consider common principles which underpin such agreements.

WAY FORWARD

Once the industry and Commonwealth agencies have finalised a new package of measures for incentivising frontier exploration, government support will need to be obtained through the normal budgetary processes leading up to and beyond the Federal Budget in May 2008.

A strategy for engaging with the states/NT on frontier exploration will need to be developed under the auspices of the UPGS once the study on pre-competitive research is completed.

3.3 More consistent and more efficient approvals and regulatory regime for petroleum exploration, development and operations

KEY OPTIONS

- 7.1.1 The Australian Government to commission the Productivity Commission (PC) to undertake an extensive review of the regulatory system for petroleum activities across all jurisdictions (Commonwealth, state and territory) that includes:
- a benchmark of the Australian petroleum regulation system with globally competing provinces, including the United States, Canada, the United Kingdom, Norway, Indonesia and Brazil
 - ensuring that the Prime Ministerial Taskforce Principles for Good Regulation are adopted
 - a consideration of opportunities for streamlining and removing a number of areas of duplication in petroleum regulation, whilst ensuring that governments are able to continue to regulate industry on the issues that matter to them to provide public assurance
 - implementing clear timeframes for approvals retained under the new system to further reduce the potential delays to projects arising out of regulatory requirements.
- 2.1.2 Identify and implement possible adjustments to regulatory requirements to ensure the maximum recovery of petroleum from mature and marginal petroleum fields and assess methodologies adopted by overseas jurisdictions to prolong the life of producing petroleum projects.

BACKGROUND

Australia's oil and gas exploration and production industry is fully supportive of a strong regulatory system that is well enforced. This ensures that the industry has a clear understanding of the requirements it must meet, while giving the public confidence that petroleum producers are adhering to sound, responsible operating practices. However, the length and complexity of the multi-jurisdictional approvals regime is contributing to an international perception that Australia is a difficult place to invest in oil and gas exploration and development. This is reducing Australia's competitiveness for petroleum investment.

In response, the Strategic Leaders' Report set a target that:

By 2009 governments, in consultation with industry, reform numerous aspects of the approvals and regulatory framework that are significantly increasing project risks and costs and are becoming a major deterrent to timely petroleum exploration and development in Australia.

This new regulatory system should:

- enhance Australia's international competitiveness
- provide shorter and predictable approval times

- be transparent and have objectives-based processes
- ensure uniformity across jurisdictions
- result in the elimination of duplication.

As well as improving the efficiency of regulatory and approvals processes, more fundamental reform is required which recognises the unique circumstances of the oil and gas industry, where a single project can often cross three regulatory jurisdictions.

Several reforms were proposed (options 7.2.1 to 7.2.4) which suggest extending current multi-jurisdictional forums and processes and perhaps ultimately, moving to a national regulatory authority for all approvals for the oil and gas industry. However, to better inform the reform process, it was suggested that the Productivity Commission undertake a comprehensive review of all approvals and regulatory requirements for oil and gas projects across all jurisdictions.

This would be a separate review to the review of regulation of primary industries currently being undertaken by the Productivity Commission.

ACTION TO DATE (* *)

APPEA has met with the Productivity Commission to provide input into the current review of primary industries and to discuss the proposed review of the oil and gas industry. Information and a case study from APPEA's written submission have been included in the commission's draft report on regulation of primary industries.

The commission is supportive of a separate petroleum review and support from the Ministerial Council for Mineral and Petroleum Resources (MCMPR) is currently being sought. The approval of the Prime Minister and state/territory leaders also needs to be obtained through the Council of Australian Governments.

Separate to that process, some state governments (including the West Australian Auditor General) have commenced reviews of petroleum regulation and/or approvals processes and the Upstream Petroleum and Geothermal Sub-committee of the MCMPR is also considering options for regulation reform. APPEA is collecting further information from members regarding potential areas for further regulation reform and providing input into those processes as opportunities arise.

APPEA is also engaged with DRET's consolidation of petroleum regulations project which released its draft report on 28 September 2007. The report outlines some 54 recommendations for streamlining and removing duplication from petroleum regulation.

Progress with other options

Options 1.4.2 and 1.4.3 concerning regulatory processes for exploration will be covered by the proposed Productivity Commission review.

Expansion of the role of the Environmental Assessors Forum, proposed in option 7.2.1, is progressing with the forum in April 2007 agreeing to expand its scope to onshore environmental approvals.

Options 7.2.2 to 7.2.4 concerning a national approach to regulation, will be considered following the completion of any Productivity Commission review.

Regulatory settings to maximise end-of-life recovery

After further consideration of issues impacting on the operation of fields nearing the end of their economic life (option 2.1.2), the Implementation Group concluded that these relate largely to regulatory requirements rather than shortcomings in the tax or royalty regimes. The PRRT automatically adjusts according to profitability and onshore royalty regimes already have provision for royalties to be varied for various reasons, potentially including a desire to prolong field life.

Wood Mackenzie has been commissioned to report on the regulatory requirements imposed by other countries and approaches taken to prolong the life of petroleum projects while maintaining acceptable safety and operational standards. More information about the nature of the problems being encountered and how they could be addressed is also being sought from Australian operators.

WAY FORWARD

Commencement of the Productivity Commission review is contingent on approval by the MCMPR and COAG. The federal election has delayed this process but APPEA will be seeking to have the review considered and agreed by governments as soon as possible in 2008.

APPEA will also be providing a written submission to the recently announced review of approvals processes being undertaken by the WA Office of the Auditor General.

Any changes to regulations needed to maximise field recovery and prolong the life of producing projects will be considered once the Wood Mackenzie study is completed and further advice is received from Australian operators.

3.4 Harnessing the environmental benefits of gas

KEY OPTIONS

4.3.2 Consider the introduction of a market mechanism-for example, a national emissions trading system, linked to an international regime that places a price on carbon-to incorporate the economic, environmental and social costs and benefits of energy resources in a way that does not increase costs for trade-exposed industries.

3.1.1 As part of the consideration of market mechanisms, review and reform energy taxation and renewable energy programs so as to remove tax- and subsidy- related distortions and ensure competitive neutrality between gas and other fuels.

BACKGROUND

Greater use of Australian gas, domestically and overseas, as envisaged in the strategy's targets, could result in the avoidance globally of 180 million tonnes of carbon dioxide equivalent a year by 2017 when compared with a coal alternative. This is equivalent to more than one quarter of Australia's projected greenhouse gas emissions in 2017.

Section 6.3 of the Strategic Leaders' Report on Domestic Gas Market Development, pointed to a number of impediments that are constraining the growth of Australia's gas production including energy taxation distortions, subsidies for renewables, and regulations that distort price signals and investment decisions.

Section 6.4 on greenhouse highlighted the significant impact (positive and negative) that greenhouse policies and programs can have on gas development. Policies and programs developed around the country by state, territory and national governments should be consistent and all aim to achieve maximum greenhouse gas abatement at least cost to industry and the community. However, this is not always occurring so the greenhouse benefits of gas are not being fully realised.

Unlike nuclear energy and the large scale adoption of renewable energy forms, the technology is available now for gas to be making a much larger contribution to reducing Australia's greenhouse gas emissions at lower total cost.

The SLR identified two key areas which could make a major contribution to achieving the strategy's vision and targets, are at early stages of development and hence warrant particular attention. These are the key options noted above, namely those related to the development of an emissions trading regime (option 4.3.2 reflected also in option 3.3.1) and the provision of a level playing field for fuel-on-fuel competition (option 3.1.1).

Other gas market development and greenhouse options

The SLR identified a number of other options for addressing impediments to gas market growth and improving greenhouse policy. Many of these are not new and have been the subject of APPEA policy positions and discussions with governments for some time and in various other forums outside of the oil and gas strategy. These include:

- competition and regulatory policies that support open, competitive and efficient markets (option 3.1.2)
- increasing gas-based processing industries to Australia (option 3.2.1)
- the pursuit of long-term global agreement and solutions (option 4.1.1)
- the development of a more consistent national set of greenhouse policies, programs and actions (options 4.2.1, 4.2.2 and 4.3.1).

ACTION TO DATE (* *)

APPEA is providing regular input into the development work on emissions trading being undertaken by the Department of Climate Change. This builds on activity throughout 2007, which included written submissions, meetings with members of the Prime Ministerial Task Group on Emissions Trading and participation in public forums. An initial submission, prepared in accordance with APPEA's agreed position on greenhouse policy (including the need to remove tax- and subsidy- related distortions between fuels) was provided in March 2007 and more recently, a second submission responded to the department's discussion paper on credit for early action.

APPEA's positions on a global approach (option 4.1.1) and national abatement actions (option 4.3.1) were broadly adopted in both the May 2007 task group report and the government response, although not every individual item was featured in the government announcements. Preliminary discussions have been held with the new government and these will continue in 2008.

An economic modelling study of the effects of emissions trading on the oil and gas industry has been recently completed. This has highlighted a number of key issues and sensitivities to be considered in the further development of APPEA's policy positions and input into the government work on emissions trading.

In July 2007, APPEA provided a submission to the *Owen Inquiry into Electricity Supply in NSW*. APPEA's input was well received and the Inquiry's recommendations and the NSW Government's response encourage gas as the fuel source of choice for NSW's next base-load power station.

The need for a single mandatory national greenhouse gas reporting system (option 4.2.2) was emphasised in APPEA's written submission and appearance before the Senate inquiry into the *National Greenhouse and Energy Report Bill 2007*. The Bill became law in September 2007 and establishes a mandatory reporting system to come into effect from 1 July 2008.

Although not considered in detail by the Strategic Leaders' Report, the voicing of concerns about gas supply security within the Australian gas market and discussion of possible responses, increased during the year. While acknowledging a short-term lack of spare supply capacity in the West Australian market, the industry has maintained that higher prices will bring new gas into the market to satisfy customer requirements. Governments could encourage increased gas supply by addressing approvals delays and other impediments and increasing investment in geoscience and infrastructure (issues and options in each of these areas were identified in the Strategic Leaders' Report). However, interventions in the market which may have short-term appeal for some, but which would have the perverse effect of discouraging investment in new gas projects, should be rejected.

WAY FORWARD

APPEA (through its Energy Policy Committee and Greenhouse Task Force) will continue to have input into the design and development of proposed emissions trading regimes, other greenhouse policies and programs and opportunities for promoting the increased development of Australia's gas resources.

Governments will need to ensure that any policy responses will improve Australia's long-term attractiveness for gas exploration and development.

The oil and gas industry will also need to be active in the increasing debate about infrastructure and the implementation of policies announced by the new Australian Government. The provision of adequate social and economic infrastructure in regional areas is crucial to the development of Australia's gas industry.

3.5 Continuously improving environmental and safety performance and increasing community awareness of the industry's performance and values

BACKGROUND

A safe workplace and minimal disturbance to the environment are crucial to achieving the strategy targets and maintaining community and government support and the industry's 'licence to operate'. The petroleum exploration and production industry has long been one of the safest industries in Australia. Preventable accidents do, however, still occur and therefore the strategy has identified two options containing 14 actions aimed at improving the industry's safety performance and establishing it as a global safety leader. The Strategic Leaders' Report proposed the following targets:

- A commitment by industry leadership that the industry will not support any decision that compromises safety for the sake of any other business objective.
- Achieving a year-on-year reduction in all safety incidents, including high-potential near-miss events.
- Adopting an industry-wide target of zero safety incidents and high-potential near-miss events.

Similarly, the industry's environmental performance is crucial to the maintenance of government and community support and its 'licence to operate'. The environmental performance of the Australian oil and gas industry is world class, but this standard will be maintained only through a strong commitment to adaptive management and environmental research.

The strategy aims to develop the industry's reputation as a trusted manager of the environment by:

- ensuring that there are no high-level environmental incidents recorded by the industry and that there is a year-on-year reduction in all other incidents
- reducing the average operational footprint of the industry through adopting new technologies, considering opportunities

for infrastructure sharing, and encouraging the use of environmental offsets

- becoming a significant contributor to reducing the growth in Australian and global greenhouse gas emissions and to improvements in air quality
- improving the responsible use of water resources and increasing the potential for downstream use of produced formation water.

Adaptive management, research and risk-based regulation should underpin the industry's approach to environmental management and government approaches to regulation. Governments must ensure that restrictions on the industry are based on the best available science and that proposed mitigation measures are cost-effective, risk-based and proportionate to the significance of the environmental problem being addressed.

The Strategic Leaders' Report proposed eight options for improving the industry's environmental management including options for oil spill prevention and response and managing seismic exploration and operations in sensitive environments.

ACTIONS TO DATE

Safety management (* * * *)

Safety management has been a major priority for the Australian oil and gas industry with many of the initiatives proposed in the Strategic Leaders' Report implemented or well underway as 2008 begins. The proposal for a new forum through which industry leaders, regulators, policy makers and the workforce can discuss and drive improvements in safety performance (option 5.1.2) has been successfully implemented. APPEA's National Safety Conference in August 2007 brought together 294 representatives from all sectors and levels of the industry including 142 workforce representatives and 30 chief executives of the Australian operations of oil and gas companies.

This three-day workshop, including the Health and Safety Representatives Forum and the inaugural CEOs' Forum resulted in the development of a range of new safety initiatives. The CEOs' Forum for example, established five working groups to develop strategic initiatives for presentation to APPEA members. Progress will also be reviewed at biannual meetings of the CEOs' Forum and each year at the National Safety Conference.

Several of the initiatives proposed in option 5.1.1 have also been implemented including:

- appointment of two dedicated industry safety positions in APPEA in Perth (first officer appointed in February 2007, second appointed in January 2008)
- increased oversight of safety issues by APPEA Council and industry leaders (resulting from the CEOs' Forum and subsequent referrals to APPEA Council)
- improvements to performance benchmarking and data collection (procedures agreed and implemented)
- development of an offshore contractors working group for service companies, constructors and maintainers (first meeting expected in the first quarter of 2008)
- relaunch of the APPEA Safety Alerts System in August 2007.

Environmental management (* *)

A number of initiatives in environmental management are also being progressed through forums such as APPEA's Environment Affairs Committee, the Environment Assessors Forum chaired by the Commonwealth and the Commonwealth's Standing Committee on Environmental Approvals (jointly chaired by the Department of Resources, Energy and Tourism and Department of Environment, Water, Heritage and the Arts).

As proposed in option 6.1.1, APPEA's Code of Environmental Practice is currently being reviewed with a new draft recently provided to governments and non-government organisations for comment. Opportunities for information sharing among

operators have also been expanded through APPEA committees, conferences, other events and reporting processes.

In relation to oil spills (option 6.3.1), the Environment Assessors Forum has been asked to clarify current duplication in the roles of several government agencies. Workshops, conferences and improvements to equipment have enhanced Australia's ability to respond to an oil spill.

Revised seismic guidelines (relevant to option 6.4.1) have been released and APPEA members are supporting a \$30 million Joint Industry Exploration and Production Sound and Marine Life Program being coordinated by the International Association of Oil and Gas Producers (OGP). As part of this initiative Australia's oil and gas industry will undertake a number of studies at home and abroad over the next two years. These aim to develop a comprehensive understanding of the potential environmental risks from oil and gas industry operations, develop credible and effective mitigation measures and improve regulatory and planning processes.

APPEA members are also looking at future research needs in relation to the hearing sensitivity and behavioural patterns of cetaceans.

WAY FORWARD

Safety management will continue to be a high priority focus within the industry. The availability of dedicated safety officers within APPEA to liaise between regulators and operators and the establishment of more effective and consultative forums across all levels of the industry will continue to generate new ideas and approaches to improving safety. Key priorities in 2008 will be the resourcing and implementation of initiatives agreed at the August 2007 Safety Conference, HSR Forum and CEOs' Forum and in maintaining the momentum and focus on safety.

APPEA will continue to foster avenues for information sharing and best practice within the industry. Priority also needs to be given to the achievement of a stronger and more consistent commitment within all levels and agencies of government to rational risk-based regulation and core policy principles for good environmental regulation. This includes ensuring that Commonwealth and state processes for expanding marine protected areas continue to provide access for petroleum exploration and development.

3.6 Improving and better coordinating research and development

KEY OPTIONS

- | | |
|-------|--|
| 8.1.1 | To coordinate research efforts, establish a national framework for research and the development and application of technology. |
| 8.1.2 | Further develop and refine currently available technology roadmaps using the results of the review and analysis of the state of research and development in Australia and particular local needs undertaken as part of option 8.1.1. |
| 8.2.1 | The oil and gas industry to consider the funding needed to support the priorities identified in the national research framework and develop a world-class petroleum technology sector. |

BACKGROUND

The global petroleum industry is one of the most technologically dependent and innovative industry sectors. Improvements in technology are continually extending the limits of what can be discovered and how it can be economically developed. While important to the industry globally, the development and utilisation of technology is crucial to the growth of the Australian petroleum industry. It needs to be one of Australia's main competitive advantages for petroleum investment, recognising and finding solutions to local challenges such as Australia's complex petroleum geology, its low discovery rate for oil, its abundance of remote gas and high cost structure.

In preparing the Strategic Leaders' Report, industry and government representatives came to the conclusion that while Australia has some good research institutions producing good research outcomes of significant value to the industry, the effort is not yet at world scale. Australia needs to, and through increasing globalisation has the opportunity to, become a major regional centre for petroleum technology and a global centre for gas extraction and use (due to the remote location of most petroleum reserves).

Achievement of the strategy's LNG and domestic gas growth targets would make Australia one of the world's largest gas producers and create the opportunity for the nation to become a major global centre for gas-related research. Australia would be in a unique position since there are very few other centres in which gas research receives such priority.

To enable the industry and governments to better understand, coordinate and promote the development of Australia's petroleum research capability, the SLR proposed the development of a national framework for petroleum research, development and demonstration with the aim of:

- improving frontier exploration and reducing exploration costs and risks generally
- providing technologies for enhanced oil recovery and remote gas development
- establishing Australia as a leading gas research centre
- reducing the industry's environmental footprint.

This would include an assessment of current research capabilities and gaps, agreement on priorities and the development of strategies (or road maps) to achieve them. The funding needs and respective roles for public and private funding would also need to be considered and better managed.

ACTION TO DATE (*)

Two workshops of APPEA members were held during August 2007 to further define the need for greater R&D coordination and how this might best be achieved. The workshops identified a range of industry research requirements and capabilities available to meet these. It was felt that through the expertise of the CSIRO and a number of Australian universities, Australia is well placed to provide strategic long-term petroleum research with a time frame of ten years or more to completion and application. However, Australia's research capability in short to medium term technology development and provision of technology services is of limited depth.

In the case of long-term research, the main issues are about achieving better coordination and returns from public funds, alignment with the industry's long-term research requirements and levels of public funding. Further work needs to be done in these areas.

The workshops considered various mechanisms for better coordinating and increasing Australia's short to medium term research capability. Staff from the Industry Technology Facilitator (ITF) in the UK spoke about how petroleum companies there jointly sponsor research projects undertaken by research providers (individually or jointly). A proposal for the establishment of a similar research brokerage service in Australia is currently being considered by APPEA members.

WAY FORWARD

Regardless of whether or not the industry proceeds with the ITF proposal or a similar coordination mechanism, there still remains a need for an overarching petroleum R&D framework to be developed as proposed by the SLR. As a first step, the Implementation Group has agreed to commission an independent review of R&D capability and gaps. The development of the terms of reference and the identification of suitable consultants to undertake the review are currently underway. Outcomes from the review together with an industry assessment of research needs and priorities, would then be key inputs into the development of the national petroleum R&D framework.

3.7 Implementing a national petroleum skills and vocational training plan

KEY OPTIONS

Defining and achieving industry targets:

- 9.2.1 ■ Member companies strive to recruit and train the staff required to deliver on their five-year business plans.
- 9.2.2 ■ By the end of 2008 APPEA member companies achieve and maintain an average training rate of 15 per cent of production staff being enrolled in some form of accredited training program.

Measures to increase female, Indigenous and mature-age workforce participation:

- 9.2.4 ■ Provide incentives to encourage employees approaching retirement to remain as supervisors to technical trainees and/or mentors to recent graduates.
- 9.2.5 ■ Increase industry information sharing and collaboration about Indigenous training and employment programs so as to make greater use of a source of local labour that is largely untapped and to support the implementation of Australian Technical Colleges—for example, in the Pilbara and Darwin—that will have a strong Indigenous focus.
- 9.2.6 ■ Develop and implement programs for attracting greater female and Indigenous participation in the industry.

Increase support for vocational education and training:

- 9.2.7 ■ Extend the Process Plant Operators VET in Schools program introduced in Western Australia during 2006, to other states and territories.
- 9.4.4 ■ Companies to support increased vocational education training in schools in petroleum-related disciplines (such as the Process Plant Operators VET in schools being piloted in Western Australia) by accommodating student trainees.

BACKGROUND

The oil and gas industry has identified skills shortages as a major threat to the achievement of the industry strategy's targets. Some otherwise economic development opportunities could be lost or deferred, putting at risk the ability of the industry to meet local and export energy demand in a timely manner, thus forgoing significant national benefits.

The oil and gas industry faces long-term shortages in the disciplines of petroleum engineering, geoscience and chemical engineering. It is also very short of technical personnel in oil and gas plant process operations and maintenance. In addition, new projects are taking longer to build and/or costing more as a result of the economy-wide shortage of tradespeople.

The Strategic Leaders' Report proposed the development and implementation of a long-term, multi-faceted skills education and training strategy that takes in the following elements:

- better understanding of the extent and nature of skills shortages and future trends
- better resource planning and investment in training
- improving community understanding of the industry and its attractiveness to potential employees
- working with governments to ensure that education and training budgets are directed to the areas of greatest need.

To achieve these outcomes, the report proposed 19 specific options or actions to be taken by the industry and/or governments. Those that could add greatest value and are currently being given the highest priority are listed above.

ACTIONS TO DATE (* * *)

Defining and achieving industry targets

The APPEA Skills Education and Training Committee is reviewing the targets proposed in Options 9.2.1 and 9.2.2 and is developing recommendations for consideration by APPEA members. These are important proposals which need to be fully considered since they could help encourage a more uniform contribution to education and training across all parts of the industry.

Measures to increase female, Indigenous and mature age workforce participation

APPEA has sought and received Commonwealth Government funding for a National Skills Shortage Strategy (NSSS) project to develop a workforce planning and skills development model for the oil and gas industry. Key elements of the project, to be completed by October 2008, include:

- development of an industry-wide recruitment strategy to increase the number of females employed on a permanent full-time basis in the oil and gas industry, particularly in relation to Australian Apprenticeship positions
- the retention of existing mature-age employees in the oil and gas industry, and the development of strategies to recruit other mature age workers into the industry
- the development and introduction of pilot programs for women, Indigenous Australians and mature-aged entrants to the oil and gas industry in Western Australia, South Australia and the Northern Territory
- development of an oil and gas industry employees mentoring and coaching program
- development of an Indigenous Australian preparatory program to equip adult aboriginal people in the Pilbara and Kimberley regions of Western Australia for specific technical training relevant to the oil and gas industry
- development of an employer engagement strategy to increase industry awareness of and utilisation of these programs and other vocational education and training initiatives.

Following discussions between APPEA and the Department of Education, Employment and Workplace Relations, the Australian Technical College will now be established in Port Hedland (with sites also in Roebourne and Onslow) and will be primarily focused on the training and eventual employment of Indigenous people in the Pilbara region.

The Australian Centre for Energy and Process Training (ACEPT) in Perth is currently conducting a pilot Indigenous school-based traineeship for 14 year 11 students (including 4 females) and APPEA is in discussions with ACEPT about the development of an all-female process plant operator course.

Increase support for vocational education and training

The two-year pilot program at ACEPT is nearing completion with ten students in year 12 and 22 students in year 11 due to have completed Certificates in process management at the end of 2007. The NSSS project includes funding to extend this program to the Northern Territory and South Australia in 2008.

APPEA is encouraging TAFE and other registered training organisations to deliver the classroom based aspects of PMA02/08 competencies, and utilise ACEPT for the practical components.

The key to continued success though, is in the willingness of APPEA member companies, both operators and service providers, to provide work places during training followed by genuine employment opportunities for successful VET graduates.

Other options and initiatives

As indicated in Appendix C many of the other elements of APPEA's skills education and training strategy are also moving forward including:

- APPEA participation in the annual seminars conducted around Australia by the Australian Careers Service for career advisers (option 9.3.1)
- site visits for career advisers and key educators (option 9.3.2)
- the WA year 10 Schools Information Program has been introduced in the NT and is being considered in Victoria and SA (option 9.3.3)
- increased traineeship positions being created by several oil and gas companies (option 9.3.4).

Option 9.4.5 (proposing a reduction in university fees) will not be further pursued. Evidence presented at the recent Earth Sciences Summit held by the Australian Geoscience Council, indicates that student intake numbers are increasing (18% over the past 5 years) but are being constrained mainly by staff shortages and ageing facilities.

WAY FORWARD

Many of the options will be further progressed through the ongoing refinement and implementation of the skills, education and training strategy described in the SLR. The pilot programs being developed in the NSSS project for example, will be further refined and extended as experience with their implementation increases. The Process Plant Operators course in schools and the Schools Information Program are to be extended to other states and the Northern Territory.

New significant initiatives are expected to include:

- a decision by APPEA members as to whether targets would help to raise performance across the industry and if so, what those targets should be and how they should be promoted among oil and gas companies and service providers (options 9.2.1 and 9.2.2)
- actions flowing out of such targets such as increased company support for traineeships, graduate (and undergraduate) employment, training programs and the more targeted employment programs being developed under the NSSS
- a second application for a grant under the NSSS to undertake a skills and training supply and demand analysis (option 9.2.3)
- a second attempt at securing government support for the establishment of a petroleum industry bursary for secondary school students (option 9.4.3).

Appendix A

Australian Upstream Oil and Gas Industry Strategy Implementation Group

The following individuals are members of the Australian Upstream Oil and Gas Industry Strategy Implementation Group.

Members

-
- John Ellice-Flint (Chairman) – Santos

 - Phillip Byrne – BHP Billiton

 - Clinton Foster – Geoscience Australia

 - Agu Kantsler – Woodside Energy

 - Grant King – Origin Energy

 - Steven Gerhardy (Project Officer) – APPEA

 - John Hartwell – Australian Government Department of Resources, Energy and Tourism

 - Jim Limerick – Western Australian Department of Industry and Resources

 - Belinda Robinson (Project Manager) – APPEA

 - Dale Seymour – Chairman, Standing Committee of Officials, Ministerial Council on Mineral and Petroleum Resources and Victorian Department of Primary Industries

 - Andrew Young – Anzon Australia Limited

Appendix B

Key initiatives and options

Table 2: Impact, timeframe and status of high value-adding initiatives

Key initiatives	Options	Impact ⁽¹⁾	Timeframe ⁽²⁾	Status ⁽³⁾	Total
Frontier exploration	1.2.1-1.2.4, 1.2.6	4	4	3	11
Productivity Com'n review	7.1.1	4	3	3	10
Employment diversity	9.2.4-9.2.6	3	3	3	9
Emissions trading and competitive neutrality	3.1.1, 4.3.2	3	4	2	9
Skills and training targets	9.2.1, 9.2.2	3	3	2	8
Industry training support	9.2.7, 9.4.4	3	3	2	8
Fiscal terms for gas projects	2.1.1	4	3	1	8
Approvals and reg'n reform	1.4.2, 1.4.3, 7.2.1-7.2.4	4	2	2	8
Onshore geoscience	1.1.5	3	3	2	8
R&D framework	8.1.1, 8.1.2, 8.2.1	3	2	2	7
End of project regulation	2.1.2	1	3	2	6

(1) Impact in meeting strategy targets:
4. High, potentially transformational 3. Significant 2. Moderate 1. Low

(2) Timeframe for impact:
4. within 12 months 3. 1-2 years 2. 2-5 years 1. More than 5 years

(3) Current status:
4. Agreed by industry and government (s) 3. Process for reaching agreement is well defined
2. Moving forward but significant work remaining 1. Stalled but still being discussed

Note that Table 2 does not reflect all of the activity emanating out of the industry strategy in that a number of options in the Leaders' Report, in the areas of environmental management, greenhouse policy and regulation for example, require ongoing input into government policy and program development rather than specific, one-off actions. These are being managed by APPEA through its various policy committees and established communication processes with governments and other stakeholders. As indicated in Appendix C, good progress is being made in many of these areas. While monitoring their progress, the Implementation Group has focussed most of its attention on the options identified in Table 2.

Appendix C

Options status— actions completed and outstanding

Key options listed in Chapter 3, having the greatest impact and requiring policy changes or new initiatives are bolded.

Priority/ option	Option	Actions completed	Outstanding actions
1	AN IMPROVED FISCAL FRAMEWORK FOR GAS PROJECTS		
2.1.1	Implement key adjustments to the company tax regime to reduce the distortionary impact of income tax on the economics of gas projects. Under the existing provisions, gas developments generally incur a tax liability prior to generating a risk-adjusted return on invested funds. Reform could be achieved through the application of a five-year write-off under the depreciation regime. Such a reform would also have the opportunity of achieving significant greenhouse-related benefits by encouraging the development of a suite of new gas-based projects.	Further information provided to the government.	Project proponents to engage with government agencies upon advice from DRET.
2	AN IMPROVED FRAMEWORK FOR EXPLORATION		
1.1.1	Improve coordination of research and data management among various public institutions.		To be considered by industry-government, through the APPEA Data Working Group and Petroleum Data Consultative Group.
1.1.2	Adoption of common data management standards across all jurisdictions.		To be considered by industry-government, through the APPEA Data Working Group and Petroleum Data Consultative Group.
1.1.3	Establish a national virtual geoscience library through common data standards and ease of access on a national and streamlined basis.		To be considered by industry-government, through the APPEA Data Working Group and Petroleum Data Consultative Group.
1.1.4	Geoscience Australia to acquire new pre-competitive data to attract industry to frontier areas.		GA/DRET to liaise with APPEA regarding acquisition of frontier data (ongoing process).
1.1.5	Expand support for onshore pre-competitive geoscience initiatives so as to stimulate greater interest in onshore frontier basins.	Study into the benefits of pre-competitive geoscience completed by Dr Trevor Powell. Includes case studies from offshore GA work and onshore examples from SA, Qld, WA and Vic.	Use study findings to promote greater onshore geoscience research.

Priority/ option	Option	Actions completed	Outstanding actions
1.2.1	<p>Develop a package of measures for increasing frontier exploration. Measures could include:</p> <ul style="list-style-type: none"> ■ A broader definition of 'frontier acreage' which includes conceptual definitions of 'frontier'-including geographical or geological criteria-and increase the availability of incentives to a greater number of areas onshore and offshore. 	<p>APPEA, DRET and Geoscience Australia have been developing options for enhancing frontier exploration in both offshore and onshore Australia.</p> <p>These include a broader definition of 'frontier acreage' allowing for a broader application of incentives to geological and geographical frontiers. Industry has advocated a 175% investment allowance for exploration costs incurred in frontier areas. Improvements to acreage release processes are also being considered.</p>	<p>Package of incentives to be finalised and presented to the incoming government for inclusion in the 2008 budget.</p>
1.2.2/ 1.2.3	<ul style="list-style-type: none"> ■ Mechanisms additional to existing permit and fiscal terms that will encourage petroleum exploration in remote and frontier areas (such as increased company tax write-off rates for exploration expenses). 		
1.2.4	<ul style="list-style-type: none"> ■ States/NT to review and improve incentives for onshore frontier exploration. 		
1.2.6	<ul style="list-style-type: none"> ■ Systems such as flow through shares to improve access to capital for junior participants in both onshore and offshore exploration. 		
1.4.1	<ul style="list-style-type: none"> ■ Develop processes for faster cycling of acreage. 		
1.2.5	Promote the growth of a vibrant and expanding local services sector-for example through R&D funds.	To be considered as part of the R&D strategy in Options 8.1.1, 8.1.2 and 8.2.1	
1.3.1	Consider options for differentiating between oil and gas in the context of title terms to create favourable regimes for remote and frontier exploration.	Not considered workable or effective so deleted from consideration.	
1.4.2	Adopt set time frame for approvals.	To be considered by the Productivity Commission review of regulation and approvals (option 7.1.1).	
1.4.3	Review the roles of the joint authority and the designated authority seeking opportunities to streamline processes, remove duplication and reduce approval time lines.	To be considered by the Productivity Commission review of regulation and approvals (option 7.1.1).	
1.5.1	Develop expedited and standardised Native Title processes for access to onshore exploration acreage.	Government (C'wlth/state/NT) Native Title workshop held in October 2007.	APPEA, in conjunction with SA and WA to lead in the drafting of guidelines for use in native title agreement making.
1.5.2	All regulators to commit to the principles of balanced multiple and sequential land use and the need to maintain access to all exploration opportunities as part of value assessment.	To be included as a policy principle in APPEA submissions on environmental management and regulation.	

Priority/ option	Option	Actions completed	Outstanding actions
3	MORE CONSISTENT AND MORE EFFICIENT NATIONAL APPROVALS AND REGULATORY REGIME FOR PETROLEUM EXPLORATION, DEVELOPMENT AND OPERATIONS		
7.1.1	<p>The Australian Government to commission the Productivity Commission (PC) to undertake an extensive review of the regulatory system for petroleum activities across all jurisdictions (Commonwealth, state and territory) that includes:</p> <ul style="list-style-type: none"> ■ a benchmark of the Australian petroleum regulation system with globally competing provinces, including the United States, Canada, the United Kingdom, Norway, Indonesia and Brazil ■ ensuring that the Prime Ministerial Taskforce Principles for Good Regulation are adopted ■ a consideration of opportunities for streamlining and removing a number of areas of duplication in petroleum regulation, whilst ensuring that governments are able to continue to regulate industry on the issues that matter to them to provide public assurance ■ implementing clear timeframes for approvals retained under the new system to further reduce the potential delays to projects arising out of regulatory requirements. 	<p>APPEA has met with the Commissioner of the PC, the Environment Assessors Forum, the MCMPR Standing Committee of Officials (SCO) and the Upstream Petroleum and Geothermal Sub-committee (UPGS) to discuss regulation reform and the proposed Productivity Commission review.</p> <p>The PC review was discussed by the MCMPR in August where Ministers were initially unwilling to support the review ahead of consideration by state/NT First Ministers. The Commonwealth has sought this support through the MCMPR SCO, however the process is continuing. COAG approval will also be required before the review can commence.</p> <p>The PC has incorporated a case study on the petroleum industry in a progress report post the Banks Review findings.</p> <p>APPEA participated in a resources industry roundtable in September to discuss the draft PC report on the review of regulation of primary industries.</p>	<p>The UPGS through a number of forums are considering options for regulation reform.</p> <p>Input into reviews and reforms being conducted by Western Australia and potentially other jurisdictions.</p> <p>Obtain COAG support for the PC review.</p>
7.2.1	<p>Investigate extending the model of the Environment Assessors Forum—comprising representatives from all of the states, the Northern Territory and Commonwealth resources and environment departments and addressing offshore environmental regulation to other forms of state, territory and Commonwealth regulation.</p>	<p>During its last meeting in April 2007, the EAF agreed to expand its scope to discuss onshore environmental approval policies.</p>	<p>Expansion beyond environment issues needs to be considered by governments.</p>
7.2.2	<p>Develop a consistent and harmonised cross-jurisdiction national approach for approving exploration and development proposals, with guidelines and rules for assessment agreed nationally and jurisdiction-specific requirements based on agreed guidelines.</p>		<p>To be considered following completion of the PC review.</p>
7.2.3	<p>Develop a whole-of-government, cross-jurisdiction approach to the development of consistent policies for critical issues that includes the early engagement of all stakeholders and development of policies and regulations based on the best available science—as is being pursued by the Ministerial Council on Mineral and Petroleum Resources in relation to the decommissioning of facilities.</p>		<p>To be considered following completion of the PC review.</p>
7.2.4	<p>Consider the viability of a national regulatory authority to manage all regulatory approvals for the oil and gas industry.</p>		<p>To be considered following completion of the PC review.</p>

Priority/ Option	Option	Actions completed	Outstanding actions
REGULATORY SETTINGS TO MAXIMISE END OF LIFE RECOVERY			
2.1.2	<p>Identify and implement possible adjustments to regulatory requirements to ensure the maximum recovery of petroleum from mature and marginal petroleum fields and assess methodologies adopted by overseas jurisdictions to prolong the life of producing petroleum projects.</p> <p>(This option has been modified to focus on regulatory issues, not fiscal settings as agreed by the Implementation Group on 26 September).</p>	<p>APPEA has sent DRET an initial set of material about fiscal methodologies adopted by overseas jurisdictions to prolong the life of producing petroleum projects.</p> <p>Wood Mackenzie has been commissioned to provide more specific international information and further details are being sought from Australian operators.</p>	<p>Next actions to be determined once Wood Mackenzie study has been completed and advice received from operators.</p>
4 HARNESSING THE ENVIRONMENTAL BENEFITS OF GAS			
4.3.2/ 3.1.1	<p>Consider the introduction of a market mechanism for example, a national emissions trading system, linked to an international regime that places a price on carbon to incorporate the economic, environmental and social costs and benefits of energy resources in a way that does not increase costs for trade-exposed industries.</p> <p>As part of the consideration of market mechanisms, review and reform energy taxation and renewable energy programs so as to remove tax- and subsidy-related distortions and ensure competitive neutrality between gas and other fuels.</p>	<p>Economic modelling of the impacts of emissions trading on the oil and gas industry completed in November.</p> <p>In September APPEA attended a public forum with the Prime Ministerial Task Group on Emissions Trading and in December made a submission on the Department of Climate Change's discussion paper on credit for early action.</p>	<p>APPEA (through the Energy Policy Committee and Greenhouse Task Force) to input into the design and development of emissions trading regimes being proposed by the government and the Garnaut Climate Change Review, in line with APPEA's endorsed greenhouse policy and submission to the Prime Ministerial Task Group on Emissions Trading (including the need to remove tax and subsidy related distortions between fuels).</p>
3.1.2	<p>Review other aspects of competition and regulatory policy to ensure that they support open, competitive and efficient markets. The focus should not be on artificially constraining prices-Australia's gas prices are already amongst the lowest in the OECD- but on achieving a market characterised by freely negotiated prices that reflect the true costs of supply and delivery to markets and encourage increased investment by consumers and producers.</p>	<p>APPEA submission into Owen Inquiry into Electricity Supply in NSW. Owen Inquiry report handed to NSW Government on 11 September 2007. NSW Government response issued on 10 December 2008.</p>	<p>APPEA Energy Policy Committee to oversee APPEA input in this area, which is generally advanced through the Ministerial Council on Energy (MCE) Energy Market Reform program, the Gas Market Development program and the joint MCE-Ministerial Council on Mineral and Petroleum Resources Working Group on Natural Gas Supply.</p>
3.2.1	<p>Resolve impediments to the competitiveness of new gas-based processing industries, including the impact of Australia's tax depreciation regime for capital-intensive projects, onerous approvals processes, and requirements for land, infrastructure and skilled labour.</p>	<p>No actions unique to the downstream sector are being proposed. Progress on addressing impediments will flow from actions proposed under relevant sections of the upstream strategy (including the impact of Australia's tax depreciation regime for capital-intensive projects, onerous approvals processes, and requirements for land, infrastructure and skilled labour).</p>	
3.3.1	<p>Ensure that gas is not disadvantaged by policies that aim to provide a mechanism (such as a carbon price) to reflect the economic, environmental and social costs and benefits of different energy sources or that aim to provide subsidies for the development of other energy sources (such as renewables currently or nuclear in the future).</p>	<p>Further analysis in the form of an economic modelling project, was completed in November 2007 to inform APPEA's position.</p> <p>APPEA submission (December 2007) to the Prime Ministers Task Group on its discussion paper on credit for early action.</p>	<p>APPEA Energy Policy Committee and Greenhouse Task Force to oversee input into relevant policies and ongoing consultation with industry on the implementation of the Australian emissions trading system.</p>

Priority/ option	Option	Actions completed	Outstanding actions
4.1.1	Industry and all governments support ongoing international negotiations directed at achieving a global policy response covering all major emitters, all greenhouse gases, all sources of emissions, and all sequestration modes.	<p>APPEA submission to the Prime Ministerial Task Group supported a global approach. This global approach was adopted in both the task group report and the government response.</p> <p>APPEA chief executive attended APEC Business Summit in Sydney on 6–7 September 2007. APEC Leaders' Sydney Declaration on 9 September 2007 advocated a global response.</p>	APPEA's Greenhouse Task Force to oversee APPEA input into policy development in this area as opportunities arise, including the implementation of the Australian emissions trading system.
4.2.1	<p>Australian, state and territory governments develop a more consistent national approach to greenhouse policies and programs and, to the maximum extent possible, develop common approaches in consultation with industry that:</p> <ul style="list-style-type: none"> ■ maintain the international competitiveness of Australian industry ■ encourage least-cost abatement and the use of commercially viable technologies to reduce emissions ■ stimulate technological innovation for economic long-term solutions ■ create enabling frameworks for technology transfer—especially to developing countries ■ share the burden of adjustment equitably across the economy in a way that confers no unfair competitive advantages or disadvantages to particular industry sectors ■ maintain flexibility—for example, to adjust policies with advances in science and technology ■ do not place 'early movers' at a disadvantage. The oil and gas industry has already voluntarily taken a range of emission abatement actions. 	APPEA submission to the Prime Ministerial Task Group supported a consistent national approach. The need for such an approach was emphasised in the task group report and the government response.	APPEA's Greenhouse Task Force to oversee APPEA input into policy development in this area as opportunities arise.
4.2.2	Australian and state and territory governments, in consultation with industry, develop a single mandatory national greenhouse gas emissions reporting system.	Submission to and appearance before Senate Inquiry in the National Greenhouse and Energy Report Bill 2007, which provides for a national greenhouse and energy reporting system, and is generally consistent with AIGN policy.	APPEA Greenhouse Task Force to oversee ongoing APPEA input into the development of this reporting system.
4.3.1	<p>Australia develops a flexible portfolio of national emission abatement actions incorporating:</p> <ul style="list-style-type: none"> ■ the retention and enhancement (as appropriate) of existing programs ■ a national end use efficiency program ■ commercially practicable fuel switching ■ removal of market and regulatory barriers to gas development and marketing in recognition of the lower greenhouse gas emissions resulting from the use of gas compared to other fossil fuels ■ more uniform resource taxation between fuels ■ a national and global strategy for the development and adoption of commercially practicable low-emission technologies in all sectors ■ greater clarity about desired medium- and long-term greenhouse gas emission concentration outcomes. 	<p>APPEA submission to the Prime Ministerial Task Group supported this approach. This approach was broadly adopted in both the task group report and the government response, although not every individual item was a feature of the government announcements.</p> <p>APPEA submission (December 2007) to the Prime Ministers Task Group on its discussion paper on credit for early action.</p>	Continue to input into policy development. Actions here also linked to actions under 3.1.1.

Priority/ option	Option	Actions completed	Outstanding actions
5	CONTINUOUSLY IMPROVING ENVIRONMENTAL AND SAFETY PERFORMANCE AND INCREASING COMMUNITY AWARENESS OF THE INDUSTRY'S PERFORMANCE AND VALUES		
5.1.1	<p>Continually assess and implement new opportunities for improving safety management by:</p> <ul style="list-style-type: none"> ■ increasing the oversight of safety issues by the APPEA Council and industry leaders ■ allocating a dedicated industry safety position to APPEA to provide a day-to-day interface with the National Offshore Petroleum Safety Authority, mentor the safety performance of the APPEA members, and drive APPEA common safety initiatives ■ closer industry engagement with national and international safety organizations ■ assessment of the range of initiatives arising from the UK Step Change in Safety Project ■ annual safety performance benchmarking across all industry operators ■ investigation and adoption of leading safety performance indicators ■ development of multiple levels and forms of information sharing across the industry, including compiling and providing access to individual company safety programs ■ expansion of the APPEA Operations Forum to include contractors ■ relaunching the APPEA Safety Alerts System to improve real-time communication of safety information across the industry ■ increasing awareness and engagement through a variety of forums and conferences such as the APPEA National Oil and Gas Safety Conference and incorporating a full-day workshop dedicated to the Health and Safety Representatives Forum ■ investigating the possibility of analysis and reporting of the cost of safety initiatives, incidents and investigations ■ investigating the cultural differences between the workforces in Australia and other countries to determine which approaches may best maximise safety ■ improving the use of the safety alert system for job hazard analysis. 	<p>Council has been instrumental in deciding a number of new safety initiatives including resolving in October 2007 to appoint a second Safety Adviser.</p> <p>First Safety Officer appointed in February 2007. Second Safety Advisor appointed in January 2008.</p> <p>APPEA has held discussions with OGP, UKOAA, Step Change, AIP, and NOHSC.</p> <p>A significant role of the dedicated safety position.</p> <p>Second benchmarking letters were sent to CEOs in May 2007.</p> <p>Safety Leadership Forum agreed to forward data to APPEA for compilation and distribution to industry. Information about leading indicators is being sought from APPEA members.</p> <p>HSO Committee agreed in principle at May 07 meeting. Information about best practices is being sought from APPEA members.</p> <p>In May 07, APPEA extended participation at HSO Committee to include IADC and IMCA.</p> <p>'SEAS' Relunched on 23 August 2007</p> <p>APPEA's National Safety Conference, incorporating the Health and Safety Representatives Forum and inaugural CEOs' Forum held in August 2007.</p> <p>A theme of presentation at national safety conference with follow-up discussions at Committee level.</p>	<p>Inaugural meeting of Offshore Contractors Working Group to be held in Q1 2008.</p> <p>HSO Committee to further consider this possibility.</p> <p>Working group from Safety Leadership Forum to develop resources for senior leadership and supervisors.</p> <p>Under consideration for next iteration of alerts system.</p>

Priority/ option	Option	Actions completed	Outstanding actions
5.1.2	Establish a new forum through which industry leaders, regulators, policy makers and the workforce can discuss and drive improvements to safety performance at all levels of the industry.	Action completed. APPEA's National Safety Conference, incorporating the Health and Safety Representatives Forum and inaugural CEOs' Forum held in August 2007. CEOs' Forum to meet biannually.	
6.1.1	<p>Develop and implement opportunities for improving environmental management including:</p> <ul style="list-style-type: none"> ■ reviewing APPEA's Code of Environmental Practice. The code provides a leadership mechanism on environmental performance for all APPEA members and sends a clear message to all stakeholders about the industry's own performance expectations ■ providing mechanisms to ensure that all APPEA members have access to information, resources and environmental innovations to further improve their environmental performances and strengthen the case for regulatory reform and ongoing access to resources ■ providing for an accurate understanding of the industry's environmental performance through annual collection and reporting of industry environment performance data, to ensure that decision makers recognise the real-not perceived impacts of the industry's activities ■ ensuring that the industry works closely with governments, the workforce, contractors and the community to continually enhance environment policies and performance. 	<p>A consultation draft was released to stakeholders in October 2007.</p> <p>APPEA's EAC now includes over 40 contacts from the majority of operators and explorers. APPEA's EAC meetings now dedicate almost 2 hours of each meeting to sharing best practices 4 times a year.</p> <p>HSES Report released at the APPEA AGM in October 2007. The HSES report has been sent to Members of Parliament, Ministers and Shadow Ministers, senior officials, workforce, regulators, and industry peers and stakeholders. In all over 1000 copies have been distributed.</p> <p>Ongoing with APPEA now a member of the Environment Assessors Forum chaired by the Commonwealth and including both onshore and offshore issues.</p>	<p>Complete consultation with the Environment Assessors Forum, WWF and the Australian Conservation Foundation and finalise a revised Code.</p> <p>Facilitate information sharing through EAC meetings, the National Environment Conference and other APPEA events such as the APPEA Awards and HSES Report.</p> <p>APPEA's next Environment Workshop will be held in September 2008. However the APPEA National Conference now carries a distinct environment theme on the second day, with topics ranging from community consultation, water management, greenhouse, energy efficiency and environmental innovation in sensitive environments.</p>
6.2.1	Industry to maintain its commitment to environmental research and practices that not simply meet but exceed statutory requirements and to work with governments to ensure that any restrictions on the industry are based on the best available science.	A number of companies have committed several millions of dollars to new environmental research projects throughout 2007.	APPEA will consider publishing a new summary of recent industry research later in 2008 (the previous collation was published in 2005).
6.2.2	<p>Industry and governments to develop a more robust risk assessment of industry activities with a renewed focus that:</p> <ul style="list-style-type: none"> ■ recognises the core Principles of Environmental Policy, as agreed in the Intergovernmental Agreement on the Environment ■ has due regard to the significant accumulated body of scientific knowledge regarding the environmental consequences of industry activities ■ considers the likelihood and consequences of industry activities and the actual biological significance of the observed effects ■ considers the proposed mitigation measures and ensures that they are cost-effective and not disproportionate to the significance of the environmental problem being confronted. 	APPEA has held workshops in Queensland and Western Australia to assess the state of environmental regulation and establish a preferred model for assessing the range of projects in the industry.	The Standing Committee on Environmental Approvals and the Environment Assessors Forum may be appropriate avenues to discuss these principles for good environmental regulation.

Priority/ option	Option	Actions completed	Outstanding actions
6.3.1	<p>Regardless of the industry's good record to date, the potential consequences of an oil spill are such that the industry, in cooperation with government, must continue to develop the suite of precautions to prevent oil spills in the first instance as well as the techniques to minimise the consequences should a spill occur. This includes ensuring the following:</p> <ul style="list-style-type: none"> ■ Prevention of oil spills is industry's first priority. The industry and regulators need to continue to focus on sound design, construction and operating and maintenance practices and high levels of environmental awareness, training and commitment amongst managers, staff and contractors. ■ Rigorous ship vetting procedures are in place to ensure that petroleum products are transported safely. Australian companies need to continue to apply strict qualifying criteria to vessels carrying Australian crude oil, and all vessel operators must ensure safe berthing and loading operations and safe transportation of the crude oil to its final destination. ■ In the event of an oil spill, the industry and government are in a position to respond immediately to manage the situation. This rapid cooperative response is currently triggered through the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances. In addition, industry should continue to ensure it has oil spill response equipment stored ready for immediate deployment at strategic locations around the Australian coast to manage an oil spill anywhere in Australia within 12 to 24 hours. 	<p>While oil spills are an important factor for the design and operation of all facilities, discussions must occur within government regarding the approving authority as currently they are assessed by AMSA, Department of Environment and the Designated Authority. This has been raised with the Environment Assessors Forum.</p> <p>Oil spill preparedness workshops and the expansion of Australia's oil spill combat equipment resources have enhanced Australia's ability to respond to an oil spill at the local and regional level. Spillcon 2007 also enhanced industry and government understanding of response techniques, responsibilities and a range of response scenarios.</p>	<p>The issue of assessment of oil spill contingency plans has now been raised with the Commonwealth, and will be resolved early in 2008.</p> <p>Constant review and maintenance is required.</p> <p>The next Spillcon is scheduled for 2010 in Australia, but regional oil spill conferences will be held in Asia and the US in 2008 and 2009.</p>
6.4.1	<p>Legislative controls exist in Australia to ensure that seismic acquisition is conducted only when it has been demonstrated that potential associated impacts will not be significant. Governments, the industry and researchers must continue to work towards ensuring that regulatory requirements:</p> <ul style="list-style-type: none"> ■ protect marine mammals and fish species from biologically significant impacts of ocean users ■ properly reflect the environmental consequences of industry activities ■ account for proposed mitigation measures and ensure that they are cost-effective and not disproportionate to the significance of the environmental concern in question. <p>Option 6.4.2 concerning procedures has been merged with option 6.4.1.</p>	<p>The revised Seismic Guidelines have now been released. APPEA members contributing to strategic research through the OGP-JIP into the hearing sensitivity of baleen whales, cumulative impacts of high sound level exposure and the natural behavioural avoidance distances of baleen whales. Without these key pieces of information, further revisions to the guidelines will be difficult.</p>	<p>APPEA will use the time in the intervening period to assess the actual operational impacts of the revised guidelines especially in relation to night time operations and reduced need for shutdowns with 2km exclusion.</p> <p>A workshop of scientists to establish the appropriateness of these guidelines may be held towards the end of 2008 or early 2009, depending on progress made on a number of critical research fronts.</p>

Priority/ option	Option	Actions completed	Outstanding actions
6.5.1	<p>To maintain its access to sensitive environments the industry must work with governments and the community to demonstrate through its actions that:</p> <ul style="list-style-type: none"> ■ Conservation values are not unduly threatened by our activities. ■ All practicable mitigation strategies are considered to minimise the industry's operational footprint. ■ The industry uses mitigation measures to minimise the potential for impacts to sensitive and high-value habitats. ■ The industry takes particular care to ensure the protection of threatened and endangered species and their critical habitats. <p>Option 6.5.2 concerning industry and government responsibilities has been merged with 6.5.1.</p>	<p>APPEA has established a policy on marine planning principles for the use by all APPEA members in protected area discussions.</p> <p>The South West Marine Plan Profile stretching from Shark Bay (WA) to Kangaroo Island (SA) provides for the continuation of the government's policy to facilitate access for oil and gas exploration and development in Commonwealth Marine Reserves.</p>	<p>APPEA will continue to work on protected area and regional planning issues in the WA state waters, as well as the remaining five Commonwealth marine planning areas. This will include an extensive marine protected area network in each of these.</p> <p>First focus will be on the Southwest bioregion, followed by the Northern and North-western Bioregions towards the end of 2008.</p>
6.6.1 (new)	<p>Ensure that water policies and legislation recognise the industry's high value-added from water use and enable the coal seam methane industry to effectively manage the production and potential re-use of water in an economically sustainable manner.</p>	<p>APPEA has made a submission to a new associated water policy in Queensland and is currently working with members to develop a national water policy position for the petroleum industry. A key presentation during the APPEA 2008 Conference will highlight the outcomes of this policy position and the challenges in turning this into a valuable resource.</p>	<p>APPEA to input into the National Water Initiative and other policy development processes on water.</p> <p>APPEA to clarify objectives and activities of MCMPR group on water use by extractive industries.</p>

6 IMPROVING AND BETTER COORDINATING RESEARCH AND DEVELOPMENT

Maximising the returns from petroleum R&D:

8.1.1	<ul style="list-style-type: none"> ■ To coordinate research efforts, establish a national framework for research and the development and application of technology. 	<p>Two member workshops (9 and 21 August) have been held to assess and agree the need for greater coordination of R&D within the industry.</p>	<p>Commission an independent review of R&D capability and gaps.</p>
8.1.2	<ul style="list-style-type: none"> ■ Further develop and refine currently available technology roadmaps using the results of the review and analysis of the state of research and development in Australia and particular local needs undertaken as part of option 8.1.1. 	<p>Various mechanisms for achieving more coordinated R&D/technology solutions for short-to-medium term problems were considered (including the ITF-UK model).</p>	
8.2.1	<ul style="list-style-type: none"> ■ The oil and gas industry to consider the funding needed to support the priorities identified in the national research framework and develop a world-class petroleum technology sector. 	<p>However, APPEA has agreed to not proceed with any particular model of R&D facilitation until an independent review of R&D capability and gaps by a suitable consultant is undertaken.</p> <p>The workshops also recognised the need for publicly funded R&D in long-term technology solutions for the industry. The type of long-term research being undertaken, its appropriateness and level of funding need to be further considered by the industry and relevant federal and state/NT agencies.</p>	

Priority/ option	Option	Actions completed	Outstanding actions
7	IMPLEMENTING A NATIONAL PETROLEUM SKILLS AND VOCATIONAL TRAINING PLAN		
9.1.1	Industry to continue to work with governments in identifying skills requirements, training needs and qualifications, including shorter apprenticeships for trade skilled positions, based on demonstrated competency and knowledge.	Competency based apprenticeships available in most states and territories.	APPEA to continue to work with government departments where this is not the case in relevant areas to ensure all systems are in place.
9.2.1	Member companies strive to recruit and train the staff required to deliver on their five-year business plans.	APPEA Skills, Education and Training (SET) Committee to further discuss and put recommendation to Council.	APPEA Council consideration of SET Committee recommendation.
9.2.2	By the end of 2008 APPEA member companies achieve and maintain an average training rate of 15 per cent of production staff being enrolled in some form of accredited training program.	APPEA Skills, Education and Training (SET) Committee to further discuss the proposal and put recommendation to Council.	APPEA Council consideration of SET Committee recommendation.
9.2.3	Reconcile data on oil and gas industry skills supply and demand with the capacity of Australia's universities and TAFE to deliver relevant courses.	Initial proposal for funding under the National Skills Shortage Strategy was rejected.	APPEA will seek funding from DEEWR to achieve this option as a second stage (2008-09) to the current NSSS funding proposal.
9.2.4	Measures to increase female, Indigenous and mature age workforce participation: ■ Provide incentives to encourage employees approaching retirement to remain as supervisors to technical trainees and/or mentors to recent graduates.	Programs to increase Female, Indigenous and mature age participation are a key focus of NSSS project.	Complete NSSS project by end 2008. Develop Indigenous traineeship work plan to ensure the program develops and grows from 2008 onwards.
9.2.5	■ Increase industry information sharing and collaboration about Indigenous training and employment programs so as to make greater use of a source of local labour that is largely untapped and to support the implementation of Australian Technical Colleges-for example, in the Pilbara and Darwin-that will have a strong Indigenous focus.	Pilot Indigenous school-based traineeship for 14 year 11 students (including 4 females) underway at ACEPT. Ongoing discussions are being held with the Australian Centre for Energy and Process Training (ACEPT) about the development and marketing of an all-female VET Process Plant Operator course.	Female VET course to be ready for first semester 2008.
9.2.6	■ Develop and implement programs for attracting greater female and Indigenous participation in the industry.		
9.2.7	Extend the Process Plant Operators VET in Schools program introduced in Western Australia during 2006, to other states and territories.	Currently 10 students in year 12 and 22 in year 11. Still being bedded down and reviewed in WA.	Extend the program to the NT and SA as part of the NSSS Project utilising the Energy Apprenticeship Group (EAG) to provide group training management services.
9.3.1	Greater and more positive industry promotion and participation in targeted careers information initiatives-for example, Australian Careers Service (ACS) career advisers seminars.	Very successful ACS tour completed July-August 2007. Outstanding feedback on APPEA input from participants.	APPEA to continue involvement with the national ACS seminars for career advisers.
9.3.2	Site visits for key educators and career advisers at a variety of locations around the country.	Site tour to Dongara for TAFE WA career advisers held in October 2007.	Demand for site tours in 2008 to be assessed and conducted where required.

Priority/ option	Option	Actions completed	Outstanding actions
9.3.3	Extend the West Australian Year 10 Schools Information Program (SIP) to other states and territories.	The Year 10 Energy Challenge (SIP clone) introduced and successfully completed in 8 schools in Darwin this year.	Progress requests by schools in Gippsland to implement the SIP and discussions with the SA Chamber of Minerals & Energy.
9.3.4	Increase traineeship offers-such as the oil and gas office administration program currently being undertaken by eight young Indigenous people in Perth.	All 8 trainees that commenced in 2006 have jobs or have continued their training.	SET Committee to review the program to date and consider the need for its remarketing. Member companies to continue with this initiative with an increased number of trainees.
9.3.5	An increased number of company scholarships, and all companies with the capacity to host a graduate are doing so.		Many companies are already doing this. SET Committee to consider the need for, and if necessary, implement a publicity and/or marketing program. Extent of company support to be included in Stage 2 of the NSSS project.
9.3.6	Member companies to engage more undergraduates on vacation employment.		Many companies are already doing this. SET Committee to consider the need for, and if necessary, implement a publicity and/or marketing program and options for improving the attractiveness of providing vacation employment.
9.4.1	Develop an expedited qualification pathway based on current skills recognition.	Recognition of Prior Learning (RPL) process is being used by the ACEPT (45 Certificate II students since end 2006). Process has been streamlined so usage is expected to increase.	APPEA negotiating with TAFE WA to extend RPL more widely across the oil and gas industry, particularly to incentivise more mature age workers to remain in employment (albeit part time).
9.4.2	Ensure that immigration policies and procedures are not impediments to necessary skilled migration options.	Dept of Immigration and Citizenship Outplacement Officer available for consultation on Wednesdays in the Perth office of APPEA.	APPEA to Input into policy developments as required.
9.4.3	Establish an Australian Government Petroleum Industry Bursary to encourage Year 10, 11 and 12 students to select mathematics and science and nominate an oil and gas-related career path-similar to the Mining Industry Bursary already in place.	Initial proposal to the Minister for Education was rejected.	This to be considered as part of the DEEWR NSSS proposal for the 2008-09 funding cycle.
9.4.4	Companies to support increased vocational education training in schools in petroleum-related disciplines (such as the Process Plant Operators VET in schools being piloted in WA) by accommodating student trainees.	APPEA Skills, Education and Training (SET) Committee has endorsed the proposal.	APPEA Council consideration of SET Committee recommendation.
9.4.5	A reduction in university fees for courses not attracting sufficient students to meet long-term industry requirements-particularly in the less popular science disciplines.	Discussion held with Murdoch University. Earth Sciences Summit concluded that supply constraints (staffing and facilities) are having a greater impact than the reduction in student demand caused by fees.	Reconsider strategy in 2008, including whether to commission research on the effect of fees on course choices and whether lower course fees for sciences would attract more students (possibly by a Masters or PhD student).



www.appea.com.au