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SENATE ECONOMICS COMMITTEE

INQUIRY INTO THE OFFSHORE PETROLEUM AMENDMENT (GREENHOUSE GAS STORAGE) BILL 2008 & 3 RELATED BILLS

APPEA Submission

AUGUST 2008

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KEY POINTS

- The Australian Petroleum Production & Exploration Association (APPEA) represents the collective interest of the upstream oil and gas industry in Australia. APPEA member companies produce around 98 per cent of Australia's oil and gas.

- Reliable, secure and competitively priced energy is crucial to our everyday lives in Australia. Within this framework, oil and gas plays a key role in meeting many of our energy needs. At present, petroleum accounts for around 54 per cent of Australia's primary energy needs –this is expected to increase into the foreseeable future. The industry creates significant wealth for the country, including through the employment of many Australians, underpinning the revenue collections of governments and generating valuable export revenue for the Australian economy. A strong, vibrant and growing industry is essential to the on-going health of the Australian economy.

- APPEA commends the work of the Minister for Resources and Energy, the Hon Martin Ferguson AM MP, the Department of Resources, Energy and Tourism and the relevant Parliamentary draftsmen in preparing the *Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill* (the Bill) and related Bills. This legislation will also be ground breaking in that it will make Australia one of the first jurisdictions to develop a comprehensive legislative and regulatory framework for greenhouse gas (ghg) injection activities.

- APPEA notes this submission is made with reference to the Bills as presented to the Parliament on 18 June 2008 and so APPEA has had an opportunity to consider any Government amendments to the Bill or the report of the inquiry by the House of Representatives Standing Committee on Primary Industry and Resources. APPEA's views on the Bill may be altered by any amendments arising from these processes and the comments made here should be read with that distinction in mind. APPEA will provide the Committee with a supplementary submission commenting on the recommendations made by the House of Representatives Committee in their inquiry report, *Down Under: Greenhouse Gas Storage*, released on 15 August 2008.

- The oil and gas industry has considerable expertise in utilising and developing the technologies that are required for ghg injection and storage both in Australia and on the international stage. This fact does not seem to be well understood in the Bill.

- In addition, the Act this Bill proposes to amend has underpinned the operation of the upstream oil and gas industry in Commonwealth waters for more than four decades. Any issue that impacts on the administration of the Act is therefore of critical and fundamental interest to the industry.

- Any consideration of the development of an appropriate legislative and regulatory framework for ghg injection and storage projects in Australia needs to take place within the context of the contribution the upstream oil and gas industry, both onshore and offshore, currently makes and will continue to make to the Australian economy and environment.

- The oil and gas industry is highly capital intensive and tens of billions of dollars of capital will be needed over the next decade if frontier exploration is to expand and new oil and gas projects are to be developed.

- Australia has offered a reasonably attractive petroleum investment environment in the past and developed a reputation as being a generally "sound place to do business". It is vital that the ghg injection and storage regime enhances, rather than diminishes, these advantages. The introduction of any ghg injection and storage legislative and regulatory regime must be sensitive to the competitive position of the Australian upstream oil and gas industry.

- APPEA's views on ghg injection and storage issues fit within the broader framework of the industry's greenhouse response policy. This policy notes APPEA and its members are committed to working towards a profitable, safe, environmentally and socially responsible oil and gas exploration, development and production industry. APPEA comments on the Bill are also framed against the industry's ghg injection and storage policy objective, which is to ensure that the ghg injection and storage policy framework and associated legislative and regulatory framework:

  - does not impede the exploration and development activities of the upstream oil and gas industry in Australia

  - provides an efficient and effective regulatory framework for oil and gas project proponents seeking to store greenhouse gases as an integral component of their operations; and

  - ensures nationally and internationally consistent regulations are developed for ghg injection and storage activities.

- The process of considering the appropriate policy framework for ghg injection and storage projects in Commonwealth waters in a manner underpinned by the November 2005 *MCMPR Regulatory Guiding Principles for Carbon Capture and Geological Storage* is welcomed. It is vital that a 'fit for purpose' and consistent legislative and regulatory framework across all Australian jurisdictions is developed.

- A fundamental starting point for the industry in assessing any ghg injection and storage legislative and regulatory framework is the preservation of the rights of pre-existing title holders (referred to in the Bill as pre-commencement title holders). APPEA is of the very strong view that any ghg injection and storage-related legislation and regulation should protect the rights of pre-existing title holders and provide for the future growth and development of the Australian upstream oil and gas industry. APPEA has long recommended that any legislation should provide a framework where ghg injection and storage or other activities in an area only proceed if they do not impact on existing oil and gas operations or they permit an existing titleholder and a ghg injection and storage proponent to enter into commercial negotiation so that agreements between pre-existing title holders and ghg injection and storage proponents can be struck.

- With this in mind, APPEA notes the Bill has gone some way towards addressing this issue through section 249AF of the Bill. The level of "protection" provided by section 249AF depends on whether the petroleum title came into being pre- or post- the commencement of the amendments that the Bill will introduce.

  - As APPEA understands it, this section would mean that for pre-commencement titles and for post-commencement production titles (but, importantly, not exploration titles) the responsible Commonwealth Minister must not approve "key ghg operations" if there is a "significant risk of a significant adverse impact" on petroleum operations unless the petroleum title holder has agreed to the ghg operations and terms of the agreement are not contrary to the (undefined) "public interest".

  - While APPEA supports guidance on the Bill that states that the "impacts" of key ghg operations are defined to include impacts at both the level of geological formations and physical interference on the surface with a petroleum title holder's operations, it is important that an appropriate definition of "significant risk of significant adverse impact" is established.

  - APPEA understands that it is the Government's intention for this definition to be dealt with by regulation and we look forward to consultation on this definition when drafts of the regulations are released. It is important that this regulatory clarification is provided expeditiously.

- An important aspect of the Bill is contained in section 249CZC, which seeks to provide protection for new petroleum discoveries in areas where a ghg injection licence overlaps the area of a pre-commencement petroleum title held by a person other than the injection licensee. APPEA supports these provisions of the Bill which require that, in these circumstances, the Minister must give a direction to the ghg injection licensee for the purpose of eliminating the risk, or where it is not possible to eliminate the risk, give a direction to the injection licensee for the purposes of mitigating, managing or remediating the risk or suspend, either for a specified period or indefinitely, all or any of the rights conferred by the ghg injection licence or cancel the ghg injection licence.

- In addition, APPEA notes the Bill requires a ghg injection and storage proponent to advise the Minister of any hydrocarbon discovery but is not clear as to the Minister's obligation to advise the petroleum title holder with respect to any find. APPEA recommends the requirements of the Minister in such a scenario be clarified, as petroleum 'discovered' within an existing petroleum title clearly falls within the ownership of the petroleum title holder(s). Given that a ghg injection and storage proponent has no legal right to explore for petroleum, the intellectual property in the discovery should not reside with the proponent and should be made available to the holder of any existing petroleum title over the acreage. Should no petroleum title holder exist, intellectual property rights should reside with the Commonwealth. These data submission and release provisions should mirror the requirements that currently exist under the OPA for the petroleum industry.

- The level of Ministerial discretion contemplated in the Bill is expansive. While some of the discretion may be clarified by future regulations and guidelines, the intent of

such power in the legislation seems unwarranted and requires clarification. While the Ministerial discretions must be exercised lawfully and for a proper purpose and are subject to review in accordance with traditional administrative law principles, they could act as a disincentive for investments in both future petroleum operations and ghg injection and storage operations.

- In addition, while APPEA is supportive of the overall framework provided for by the draft Bill, the wide discretion for the responsible Commonwealth Minister in a range of matters and the fact that the Bill does not provide explicit definitions in a number of crucial areas means that the development and release for consultation of the relevant regulations and guidelines that will underpin the Bill must be undertaken as a matter of urgency.

- The Bill, at the end of sections 167 and 181 and in section 249CE, contemplates certain third party access rules for ghg injection and storage operations, to be determined by the Minister. Initial discussions with the Department had indicated that the third party access regime would only apply to ghg pipelines but the amendments in the Bill appear to apply to all aspects of ghg injection and storage activities. APPEA notes the full extent of such powers remains unclear in the Bill, with the detail to be left to regulations and from a upstream oil and gas industry perspective (the third party access rules do not apply to petroleum facilities) it is of considerable concern that such powers are being considered for ghg injection and storage facilities.

- APPEA notes the Bill intends that holders of petroleum production licences would continue to have the ability that they currently have (subject to obtaining normal regulatory approvals) to do whatever is necessary in the licence area for the purpose of recovering petroleum in the licence area, including injecting methane and/or carbon dioxide in the licence area for gas recycling or enhanced petroleum recovery and subject to approval) injecting for disposal in the licence area methane or carbon dioxide stripped from the petroleum stream that is recovered in the licence area. APPEA strongly supports the intent of the Bill in this regard as the Act and its predecessor have always clearly defined the rights and obligations of petroleum producers to re-inject carbon dioxide or gas for business purposes in Australia, such as enhanced hydrocarbon recovery.

- With this in mind, APPEA is concerned, however, that the Bill does not directly confirm this fact, but rather explicitly asks for public comment. Such an approach runs counter to APPEA's understanding of the approach to be taken in the Bill and also runs counter to the approach taken in other jurisdictions.

- The activities currently (or in some cases, proposed) to be undertaken by the holders of petroleum production licences to recover petroleum represent common and long-standing industry practice utilised by the upstream oil and gas industry to enhance hydrocarbon activities from operating oil (and natural gas) fields.

- The industry does not contest (subject to our comments contained in this submission and in the submissions of individual APPEA members) that ghg injection and storage activities unrelated to petroleum production should be regulated by the amendments proposed in the Bill and be subject to the ghg licensing and

regulatory regime. The amendments in this area should not, however, impinge on or apply new governing standards to long-standing and legitimate petroleum recovery activities.

- The Bill should also clarify the language used in the Bill, which may restrict this right to a single specific licence area. APPEA believes clarification of this point is necessary in ensuring the intent of the provision is met and that current rights that may extend to several licences in a project area are preserved.

- In addition, the amendments in the Bill proposed for the end of section 137 restrict the rights conferred by a petroleum production licence. This restriction to the rights conferred to petroleum production licence holders is inappropriate, and will impact adversely on ongoing and entirely standard upstream oil and gas operations.

- The defining of long-term liabilities and management of post-closure responsibilities for the long-term underground storage of carbon dioxide is a key ghg injection and storage regulatory priority. APPEA notes the key issue in considering long-term liabilities is to adopt an approach that balances industry certainty and community concerns. The approach adopted in the Bill is that following site closure, proponents have discharged their statutory liabilities but may still be found liable for breaches of generally applicable statutory and common law.

    - Whether such an approach provides sufficient certainty for ghg injection and storage project proponents is unclear. The proposed amendments would leave the project proponent open to common law liabilities for as long as they exist. This may be a barrier to the uptake of ghg injection and storage projects and may not be consistent with the approach taken in other jurisdictions, such as the United States and the European Union.

- With this in mind, APPEA recommends that the conditions and requirements for the injection phase and immediate post injection monitoring phase (including periods of monitoring) prior to site closure be established with certainty up-front and as long as the assumptions made as to the behaviour of the carbon dioxide plume prove to be correct, those conditions and requirements not change in any material way during the monitoring phase or at site closure time.

    - This will mean a ghg injection and storage proponent can, with a degree of certainty as to the costs of the project, make upfront commercial decisions as to whether the project is viable.

    - The Bill and any associated regulations should therefore require regulators to adhere to these principles, allowing no deviation from the conditions and requirements unless established criteria for the project are demonstrated to have changed in a material way during the project.

- A key concern that does not appear to have been addressed by the Bill and one that concerns not only liability issues but also any framework of overlapping title relates to potential situations where a ghg injection and storage project impacts an existing petroleum title holder. The Bill adopts the policy position of not

introducing any specific liability regime for ghg injection and storage and relying on common law principles. APPEA notes the lack of an effective statutory regime in these cases does not provide sufficient protection to petroleum producers. APPEA recommends a specific liability regime to encompass such cases be included in the Bill.

- As noted above, the oil and gas industry has considerable expertise in utilising and developing the technologies that are required for ghg injection and storage both in Australia and on the international stage. This fact seems to be underappreciated in the Bill.

  - A case in point is the potential use of depleted fields to store ghg in order to extend the commercial life of established facilities. Under the provisions of the Bill, as currently drafted, such activities would be impeded rather than, as they should be, encouraged.

  - Such an outcome fails to appreciate that the production licence holder is in this scenario in the best position to develop a ghg storage site. This opportunity is likely to be negated by the legislation. This means that many early opportunities for ghg injection and storage and the associated reductions (of potentially many megatonnes) in ghg emissions, may be unnecessarily impeded by the Bill.

  - Such an outcome would also be inconsistent with the overarching policy framework within which this Bill sits, which has been characterised by the Minister in his 18 June 2008 second reading speech when introducing the Bill into the Parliament as a commitment by the Government to "*comprehensive action to tackle climate change, while maintaining Australian jobs and economic prosperity*".

  - In these circumstances, the "national interest" may be best served by a recognition that ghg injection and storage activities may be progressed – particularly in the short-term – through leveraging to the extent possible on the petroleum companies via their production licence activities.

- The commencement of the amendments contained in this Bill will fundamentally change the legislative and regulatory framework facing the petroleum exploration and production industry, introducing a range of new regulatory requirements. The new framework must be developed and administered in a manner that facilitates the ongoing activities of the upstream oil and gas exploration and production industry in Australia. APPEA is concerned sections of the Bill will provide an on-going disincentive to future upstream oil and gas activity through a dilution of legal certainty for oil and gas producers compared to the level of legal certainty associated with pre-commencement activities.

- The legislative amendments include as an offence unauthorised exploration for a potential ghg storage formation or a potential ghg gas injection site in an offshore area. APPEA notes that many of the methods used to explore for petroleum will be the same as will be used to explore for a greenhouse gas storage formation. Given this, APPEA recommends the Bill be amended to clarify that a petroleum

exploration lease holder cannot be deemed to have committed an offence simply because that explorer was undertaking petroleum exploration activities that could reveal a potential ghg storage formation or a potential ghg injection site.

- APPEA looks forward to working closely with the Department to ensure that the future legislative framework for ghg injection and storage in Australia plays a role in driving the early realisation of ghg injection and storage, while providing long-term regulatory certainty, led by industry participants who have existing long-term investment and proven expertise in developing hydrocarbon resources.

1. INTRODUCTION

The Australian Petroleum Production & Exploration Association (APPEA) represents the collective interest of the upstream oil and gas (petroleum) industry in Australia. APPEA member companies produce around 98 per cent of Australia's oil and gas. Further details on APPEA can be found at www.appea.com.au.

Reliable, secure and competitively priced energy is crucial to our everyday lives in Australia. Within this framework, oil and gas plays a key role in meeting many of our energy needs. At present, petroleum accounts for around 54 per cent of Australia's primary energy needs – this is expected to increase into the foreseeable future. The industry creates significant wealth for the country, including through the employment of many Australians, underpinning the revenue collections of governments and generating valuable export revenue for the Australian economy. A strong, vibrant and growing industry is essential to the on-going health of the Australian economy.

APPEA commends the work of the Minister for Resources and Energy, the Hon Martin Ferguson AM MP, the Department of Resources, Energy and Tourism and the relevant Parliamentary draftsmen in preparing the *Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill* (the Bill) and welcomes the opportunity to provide comment on it.

APPEA notes this submission is made with reference to the Bills as presented to the Parliament on 18 June 2008 and so APPEA has had an opportunity to consider any Government amendments to the Bill or the report of the inquiry by the House of Representatives Standing Committee on Primary Industry and Resources. APPEA's views on the Bill may be altered by any amendments arising from these processes and the comments made here should be read with that distinction in mind.

APPEA will provide the Committee with a supplementary submission commenting on the recommendations made by the House of Representatives Committee in their inquiry report, *Down Under: Greenhouse Gas Storage*, released on 15 August 2008.

APPEA has been involved in the development of legislative and regulatory framework for greenhouse gas (ghg) injection and storage since its inception. APPEA was a member of the MCMPR Carbon Dioxide Geosequestration Regulatory Reference Group and internationally, is a member of the Australian delegation to the Carbon Sequestration Leadership Forum (CSLF)[1].

The oil and gas industry has considerable expertise in utilising and developing the technologies that are required for ghg injection and storage (also known as carbon dioxide capture and geological storage (CCS) or geosequestration) both in Australia (including through the former Australian Petroleum Cooperative Research Centre (GEODISC) and the current Cooperative Research Centre for Greenhouse Gas Technologies (CO2CRC) and the proposed Gorgon Project[2]) and on the international

[1] See www.cslforum.org/index.htm for further information.

[2] The Gorgon Project (operated by Chevron Australia in joint venture with ExxonMobil and Shell), which falls under Western Australian jurisdiction and is administered under the *Barrow Island Act 2003* (WA), as part of a comprehensive greenhouse gas management plan, proposes to significantly reduce greenhouse gas emissions via the injection of reservoir carbon dioxide into the subsurface. The Gorgon Project would thereby include the largest commercial scale

stage (through, for example, the Sleipner[3], Weyburn[4], In Salah[5] and Snøhvit[6] projects). This fact seems to be underappreciated in the Bill.

In addition, the Act this Bill proposes to amend[7], the *Offshore Petroleum Act 2006* (OPA), is the legislation that along with its predecessor, the *Petroleum (Submerged Lands) Act 1967*, has underpinned the operation of the upstream oil and gas industry in Commonwealth waters for more than four decades. Any issue that impacts on the administration of the OPA is therefore of crucial and fundamental interest to the industry.

Sections 3 and 4 of this submission highlight a range of issues APPEA has identified with the Bill, many of which will require amendments to the Bill to address.

A number of APPEA members have made detailed individual submissions to this Inquiry commenting on the Bill. APPEA commends these to you.

2. THE UPSTREAM OIL AND GAS INDUSTRY IN AUSTRALIA

Any consideration of the development of an appropriate legislative and regulatory framework for ghg injection and storage projects in Australia needs to take place within the context of the contribution the upstream oil and gas industry, both onshore and offshore, currently makes and will continue to make to the Australian economy and environment.

2.1 An overview of the Australian upstream oil and gas industry

An overview of the industry's economic contribution, structure, the global context within which the Australian industry operates and Australia's competitive position reveals that:

- oil and gas account for 33 per cent and 21 per cent respectively of Australia's primary energy consumption. In 2006-07, the upstream industry directly employed more than 21,000 Australians and was indirectly responsible for the employment of many tens of thousands more, the estimated value of oil and gas production in Australia was $22.7 billion while tax payments to the Australian and State and Northern Territory governments totalled more than $8.1 billion;

ghg injection and storage project in the world and would represent the largest single investment contemplated purely for the management of ghg. The joint venturers have committed to publicly disclose monitoring data from the Project, which will assist Australia in the ongoing application of ghg injection and storage technology. See www.gorgon.com.au for further information.

[3] See www.statoilhydro.com/en/TechnologyInnovation/ProtectingTheEnvironment/CarbonCaptureAndStorage/Pages/CarbonDioxideInjectionSleipnerVest.aspx for further information.

[4] See www.encana.com/operations/canada/weyburn/index.htm for further information.

[5] See www.bp.com/sectiongenericarticle.do?categoryId=426&contentId=2000566 for further information.

[6] See www.statoilhydro.com/en/TechnologyInnovation/ProtectingTheEnvironment/CarbonCaptureAndStorage/Pages/CaptureAndStorageSnohvit.aspx for further information.

[7] As well as renaming as the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.

- exports of petroleum, including crude oil, liquefied natural gas (LNG) and refined petroleum products, totalled $15.6 billion in 2006-07 and are Australia's second largest income earner after coal;

- Geoscience Australia estimated (in 2004) Australia's oil and condensate resources are equivalent to around 10 years of production at current production rates. Australia's natural gas resources are equivalent to a very substantial 110 years of production;

- the Australian upstream industry operates within a globally competitive environment. It competes for international investment funding and resources, and sells oil and gas within Australia and in competitive international markets; and

- Australia is generally perceived to offer relatively low prospectivity for oil with relatively low discovery rates and small average field sizes. Gas prospectivity is good but Australia already has many large undeveloped gas fields and new gas discoveries are often remote from markets and difficult to commercialise.

2.2 The competitive position of Australia's upstream oil and gas industry

The oil and gas industry is highly capital intensive and tens of billions of dollars of capital will be needed over the next decade if frontier exploration is to expand and new oil and gas projects are to be developed.

Australia has offered a reasonably attractive petroleum investment environment in the past and developed a reputation as being a generally "sound place to do business". A generally low level of sovereign risk, transparent legal and regulatory processes, stable political and economic environment, competitive markets and solid investment in pre-competitive geoscientific research are significant advantages which encourage global oil companies to direct a part of their activity and investment to Australia.

It is vital that the ghg injection and storage regime enhances, rather than diminishes, these advantages.

Most companies will seek to have a spread of investments across the risk/return spectrum and Australia fits into that part of the spectrum offering lower risk than many other parts of the world.

In recent years Australia's perceived exploration risk for oil has increased due to the lack of oil exploration success. Australia has therefore moved up the oil exploration risk curve. This perception of higher risk needs to be offset by a commensurate increase in expected returns, particularly for exploration in high risk frontier areas.

Development risk in Australia is also increasing. Oil project developments have tended to be in deeper waters and increasingly technically challenging. The large capital requirements, long construction periods and long payback periods associated with remote LNG projects also increase Australia's risk profile.

Regulatory issues have also become an increasing area of focus. The upstream oil and gas industry is in a unique position in that one oil and gas project can often cross two or three regulatory jurisdictions – Commonwealth offshore areas, state waters and onshore, for example. This generates numerous areas of regulatory and approvals overlap and uncertainty: one recent and relatively small oil project required 163 approvals from 22 separate authorities, including 61 approvals simply for the construction of a pipeline to bring the resource, which is in Commonwealth waters, to an onshore processing facility[8].

In an environment of generally rising oil prices and concern about tightening oil supplies, there are recent examples of overseas countries taking steps to improve the attractiveness of investment in exploration in their country. To optimise the value of its petroleum industry, Australia also needs to constantly monitor its overall competitive position for investment.

Clearly, this includes the impact of Australia's greenhouse and associated policies, including any consideration of ghg injection and storage. It is vital, therefore, that the introduction of any ghg injection and storage legislative and regulatory regime is sensitive to the competitive position of the Australian upstream oil and gas industry.

3. GREENHOUSE GAS INJECTION AND STORAGE: KEY COMMENTS ON THE BILL

The process of considering the appropriate policy framework for ghg injection and storage projects in Commonwealth offshore areas in a manner underpinned by the November 2005 *MCMPR Regulatory Guiding Principles for Carbon Capture and Geological Storage* is welcomed. It is vital that a 'fit for purpose' and consistent legislative and regulatory framework across all Australian jurisdictions is developed.

The importance of this issue was reinforced at the most recent meeting of the Council of Australian Governments, which highlighted "*acknowledged that Australia's overlapping and inconsistent regulations impede productivity growth*"[9]. As an area of new regulatory activity, it is incumbent upon all jurisdictions to ensure that the process adds to regulatory consistency rather than detracting from it.

APPEA acknowledges that as governments look to regulate ghg injection and storage projects, the initial focus will be on the potential for using and adapting existing regulatory processes or principles for ghg injection and storage-related regulation. APPEA supported this general approach as part of the consultation leading to the publication of the *MCMPR Regulatory Guiding Principles for Carbon Capture and Geological Storage*.

APPEA also acknowledges that many aspects of ghg injection and storage projects are similar to oil and gas operations and existing laws, regulations and regulatory principles provide the obvious vehicle for accommodating the regulatory framework for ghg injection and storage activities.

[8] See www.appea.com.au/content/pdfs_docs_xls/IndustryStrategy/Strategic%20Leaders%20Report.pdf for more information.
[9] See the communiqué from the Council of Australian Government's 3 July 2008 meeting, available at www.coag.gov.au/meetings/030708/index.htm.

Importantly, however, the activities are not the same. Legislation and regulation needs to accommodate and reflect these differences. They need to be low-cost, objective-based and flexible to allow for the differing geological and infrastructural attributes of particular sites/projects.

3.1 Interactions with petroleum operations: pre-existing / pre-commencement titles (section 249AF) (Terms of Reference c))

A fundamental starting point for the industry in assessing any ghg injection and storage legislative and regulatory framework is the preservation of the rights of pre-existing title holders (referred to in the as pre-commencement title holders). APPEA is of the very strong view that any ghg injection and storage-related legislation and regulation should protect the rights of pre-existing title holders and provide for the future growth and development of the Australian upstream oil and gas industry:

- APPEA has recommended to every jurisdiction (including the Commonwealth during the development of its discussion papers in 2006 and to the House Standing Committee on Science and Innovation *Inquiry into Geosequestration Technology*[10] in 2006 and 2007) that governments carefully consider the way in which they will protect the rights of pre-existing title holders and provide for the future growth and development of the upstream oil and gas industry;

- APPEA notes that to do anything that alter rights entered into in good faith would introduce an unprecedented level of sovereign risk into the regulation of the upstream oil and gas industry in Australia.

APPEA has long recommended any legislation should provide a framework where ghg injection and storage or other activities in an area only proceed if they do not impact on existing oil and gas operations or they permit an existing titleholder and a ghg injection and storage proponent to enter into commercial negotiation so that agreements between pre-existing title holders and ghg injection and storage proponents can be struck. It is important to note that APPEA's focus in this area is therefore broader than that implied by the Inquiry's Terms of Reference c), which appears to be focused on "conflict" situations.

APPEA acknowledges that this is one of the most challenging aspects of the ghg injection and storage legislative and regulatory framework and welcomes the attention the Minister and the Department has given to this most important issue. APPEA also welcomes the Minister's statement in the second reading speech introducing the Bill into the Parliament on 18 June 2008 in which he stated the proposed amendments would:

> *... preserve pre-existing rights of the petroleum industry as far as is practicable to minimise sovereign risk to existing title-holders' investment in Australia's offshore resources*[11].

[10] The APPEA submission is available at www.aph.gov.au/house/committee/scin/geosequestration/subs/sub29.pdf.
[11] See parlinfoweb.aph.gov.au/piweb/Repository/Chamber/Hansardr/Linked/5912-1.PDF and www.minister.ret.gov.au/TheHonMartinFergusonMP/Pages/CARBONCAPTUREANDSTORAGEBILLINTRODUCED.aspx for further for information.

With this in mind, APPEA notes the Bill has gone some way towards addressing this issue through section 249AF of the Bill. The level of "protection" provided by section 249AF depends on whether the petroleum title came into being pre- or post- the commencement of the amendments that the Bill will introduce.

As APPEA understands it, this section would mean that for pre-commencement titles and for post-commencement production titles (but, importantly, not exploration titles) the responsible Commonwealth Minister must not approve "key ghg operations" if there is a "significant risk of a significant adverse impact" on petroleum operations unless the petroleum title holder has agreed to the ghg operations and terms of the agreement are not contrary to the (undefined) "public interest".

The Bill provides these "protections" through:

- imposition of conditions on ghg assessment permits and ghg holding leases;
- Ministerial directions to ghg title holders;
- limitations on the circumstances in which ghg injection licences are granted/ refused;
- the treatment of petroleum discoveries in certain circumstances; and
- certain provisions regarding GHG injection licensee remedial works.

While APPEA supports guidance on the Bill that states that the "impacts" of key ghg operations are defined to include impacts at both the level of geological formations and physical interference on the surface with a petroleum title holder's operations, it is important that an appropriate definition of "significant adverse impact" is established.

APPEA understands that it is the Government's intention for this definition to be dealt with by regulation and we look forward to consultation on this definition when drafts of the regulations are released. As is considered further in section 3.2, it is important that this regulatory clarification is provided expeditiously.

APPEA's consistent view has been that the best way to ensure such conflicts do not arise is to in general[12] avoid overlapping access leases or licences (for example, through the ghg injection and storage acreage release process).

Simultaneous operations of ghg injection and storage operations and oil and gas production can create significant problems which may present significant risk and integrity issues.

APPEA recommends that, particularly in the initial stages, when the ghg injection and storage industry in Australia remains in its infancy, that such overlaps be avoided, unless the nomination of ghg acreage gazettal has the support of the existing petroleum title holder.

[12] Recognising there may be situations some petroleum operators may find the need to apply for ghg titles over parts of their existing licences. The Bill should cater for these situations.

In addition, concerns remain around the issue of renewal of pre-commencement titles and whether or not the grant of ghg storage titles that overlap such pre-existing titles would be prevented going forward or would the acreage be effectively shared between the two regimes. The levels of sovereign risk increase from exploration through to production phases. While there is an indication in the Bill that petroleum production licences will be given precedence, the exploration and appraisal expenditures undertaken need recognition in petroleum titles going forward.

APPEA recommends the Bill be amended to provide the required level of certainty.

3.1.1 Powers of responsible Commonwealth Minister to protect petroleum discovered in the title area of a pre-commencement petroleum title (section 249CZC)

An important aspect of the Bill is contained in section 249CZC, which seeks to provide protection for new petroleum discoveries (that is, discoveries made after a ghg injection licence is in place) in areas where a ghg injection licence overlaps the area of a pre-commencement petroleum title held by a person other than the injection licensee.

As APPEA understands it, this section applies where the petroleum is commercially viable, or likely to become commercially viable at some time in the future and there is a significant risk that injection and storage operations under the ghg title will have a significant adverse impact either on recovery of the petroleum or on its commercial viability and the petroleum title holder has not agreed in writing to the carrying on of the injection and storage operations.

APPEA supports these provisions of the Bill which require that, in these circumstances, the Minister must give a direction to the ghg injection licensee for the purpose of eliminating the risk, or where it is not possible to eliminate the risk, give a direction to the injection licensee for the purposes of mitigating, managing or remediating the risk or suspend, either for a specified period or indefinitely, all or any of the rights conferred by the ghg injection licence or cancel the ghg injection licence.

The Bill further provides that the Minister's directions to the ghg injection licensee may extend outside the ghg licence area which may be part of an existing petroleum title. In such cases, the title holder of the affected area must be notified and their submissions taken into account by the relevant Commonwealth Minister. It is very important that such notification takes place as early as possible. Petroleum production licence holders may need to complete subsurface assessment and modelling based on their experience and data, so as to highlight to the Minister a particular "significant adverse impact" issue. This may require reasonable time to complete.

In addition, APPEA notes the Bill requires a ghg injection and storage proponent to advise the Minister of any hydrocarbon discovery but is not clear as to the Minister's obligation to advise the petroleum title holder with respect to any find.

APPEA recommends the requirements of the Minister in such a scenario be clarified, as petroleum 'discovered' within an existing petroleum title clearly falls within the ownership of the petroleum title holder(s).

Given that a ghg injection and storage proponent has no legal right to explore for petroleum, the intellectual property in the discovery should not reside with the proponent and should be made available to the holder of any existing petroleum title over the acreage.

Should no petroleum title holder exist, intellectual property rights should revert to the Commonwealth. These data submission and release provisions should mirror the requirements that currently exist under the OPA for the petroleum industry to allow for the ease of access to the community and other interested parties in the future.

3.2 Ministerial Discretion (throughout the Bill) (Terms of Reference a)-e))

The level of Ministerial discretion contemplated in the Bill is expansive when compared, for example, to the petroleum regime in the OPA (or its predecessor, the *Petroleum (Submerged Lands) Act 1967*). While some of the discretion may be clarified by future regulations and guidelines, the intent of such power in the legislation seems unwarranted and requires clarification.

As noted, the Bill allows an extensive degree of Ministerial discretion, particularly with relation to:

- *ghg injection and storage titles – all titles*: discretion to require additional securities, declare a block is not to be part of a ghg title where there are none at present and no applications are pending;

- *ghg injection and storage titles – ghg injection licence*: discretion to give notice of intent to terminate a ghg injection licence if no injection for 5 years, and terminate 30 days after notice;

- *ghg injection and storage titles – ghg injection licence and post-commencement petroleum production licence*: an agreement between the title holder and applicant is not definitive – the terms of the agreement must also be approved for registration to the extent the agreement is a dealing;

- *key ghg operations*: discretion to give or refuse approval for key ghg operations (except where the Minister must refuse), approval may be with or without conditions, and is not limited in the matters the Minister may have regard to;

- *key petroleum operations*: discretion to determine that a title is a declared title (and not limited in matters the Minister may have regard to), give or refuse approval for key petroleum operations (except where the Minister must refuse), vary petroleum titles by adding conditions if key petroleum operations are approved, and may vary or revoke the conditions;

- *directions*: discretion to give directions to eliminate, mitigate or manage risk of significant adverse impact on petroleum exploration and recovery operations, to

protect geological formations containing petroleum pools (and vary conditions) and in "serious situations" (and vary conditions), as to any matter to which regulations may be made, in remedial situations and in relation to site-closing;

- *site closing*: discretion to issue pre-certificate notice (except in certain circumstances where the Minister must not) or refuse to issue pre-certificate notice (in both cases not limited in matters the Minister may have regard to), defer action on application for site closing certificate until such time as the Minister considers appropriate and direct licensee to apply for a site closing certificate where grounds for cancellation; and

- *other issues*: discretion to determine what significant risk of significant adverse impact means, public interest (for example, there is no limit on the matters the Minister must have regard to in considering public interest for grant of ghg injection licence), directions to Joint Authority (JA) in relation to infrastructure facilities, to the Designated Authority (DA) in relation to approval of a transfer or dealing, discretions to extend timeframes, require information, set fees, appoint inspectors and prohibit vessels from entering a ghg safety zone.

While the Ministerial discretions must be exercised lawfully and for a proper purpose and are subject to review in accordance with traditional administrative law principles, they could act as a disincentive for investments in both future petroleum operations and ghg injection and storage operations.

In addition, while APPEA is, as noted above, supportive of the overall framework provided for by the Bill, the wide discretion for the responsible Commonwealth Minister in a range of matters and the fact that the Bill does not provide explicit definitions in a number of crucial areas (most importantly public interest and significant impact) means that the development and release for consultation of the relevant regulations and guidelines that will underpin the Bill must be undertaken as a matter of urgency.

In addition, given the breadth of the Ministerial discretions, and if the regulations do not ultimately provide sufficient definition of key tests to make clear the criteria and scope of the Minister's decision, APPEA considers that inclusion of a right to a merits-based appeal of a Ministerial decision would be warranted. The Bill provides no opportunity for a merits-based appeal from a Ministerial decision with respect to whether there is, for example, a "significant adverse impact". The only relief is by way of judicial review where the onus will be on the claimant for relief to show that the Minister's decision was either unlawful or reached unlawfully[13].

[13] The Administrative Review Council has considered the decisions that should be subject to merit review, in a paper available at www.ag.gov.au/agd/WWW/arcHome.nsf/Page/Publications_Reports_Downloads_What_decisions_should_be_subject_to_merit_review#leg. This paper notes that "any administrative decision that will affect the interests of a person" should be subject to merits review. The amendments proposed in the exposure draft Bill clearly fall within this category. In addition, the Ministerial Council on Energy has recently introduced merits review into the gas and electricity law for decisions by the Minsters in relation to coverage of gas pipelines, decisions relating to the form of regulation to apply for gas access, decisions relating to approval of gas access arrangements and the pricing and revenue determinations for electricity distributors and transmission companies In other words, the majority of regulatory and ministerial decisions which are likely to impact on individual participants in the gas and electricity markets are now subject to merits review.

3.3 Third party access (at the end of section 167, at the end of section 181, section 249CE) (Terms of Reference a), b), d), e))

The Bill, at the end of sections 167 and 181 and in section 249CE, contemplates certain third party access rules for ghg injection and storage operations, to be determined by the Minister. Initial discussions with the Department had indicated that the third party access regime would only apply to ghg pipelines (as is contemplated by the amendments at the end of section 181) but the amendments in the Bill appear to apply to all aspects of ghg injection and storage activities.

APPEA notes the full extent of such powers remains unclear in the Bill, with the detail to be left to regulations and from a upstream oil and gas industry perspective third party access rules do not apply to petroleum facilities) it is of concern that such powers are being considered for ghg injection and storage facilities.

3.4 The scope of the greenhouse gas injection and storage activities of petroleum title holders (after paragraph 137(1)(c) and at the end of section 137) (Terms of Reference a)-e))

APPEA notes that this section of the Bill states:

> *... It is intended that holders of petroleum production licences would continue to have the ability that they currently have (subject to obtaining normal regulatory approvals) to do whatever is necessary in the licence area for the purpose of recovering petroleum in the licence area, including:*
>
> *(a) injecting methane and/or CO_2 in the licence area for gas recycling or enhanced petroleum recovery; and*
> *(b) (subject to approval) injecting for disposal in the licence area methane or CO_2 stripped from the petroleum stream that is recovered in the licence area.*

APPEA strongly supports the intent of the Bill in this regard as the Act and its predecessor has always clearly defined the rights and obligations of petroleum producers to re-inject carbon dioxide or gas for business purposes in Australia, such as enhanced oil recovery.

With this in mind, APPEA is concerned, however, that the Bill does not directly confirm this fact, but rather explicitly asks for public comment (noting of course, that such a request in an Bill would seem redundant). Such an approach runs counter to APPEA's understanding of the approach to be taken in the Bill and fails to acknowledge the cooperative spirit in which the upstream oil and gas industry has engaged in consultations with the Department and other stakeholders since 2006. It also runs counter to the approach taken in other jurisdictions.

For example, on 1 July 2008, the South Australian Government released for a 60 business day consultation period a series of proposed amendments to the *Petroleum Act 2000* and *Petroleum Regulations 2000*[14]. Amongst other changes, these

[14] *Petroleum (Miscellaneous) Amendment Bill 2008* (SA). Further details are available at www.pir.sa.gov.au/petroleum/legislation/proposed_amendments.

amendments would clarify the legislative intent for enhanced hydrocarbon recovery, similar to the approach intended by the Bill. Specifically, item 25 of the South Australian amendment Bill states that:

> ***25— Substitution of section 34***
> *Section 34— delete the section and substitute:*
> ***34— Production licences***
> *(1) There will be 3 categories of production licence:*
> *(a) a **petroleum production licence**;*
> *(b) a **geothermal production licence**;*
> *(c) a **gas storage licence**.*
> *(2) A petroleum production licence authorises, subject to its terms—*
> *(a) operations for the recovery of petroleum or some other regulated substance from the ground including—*
> *(i) operations involving the injection of petroleum or another substance into a natural reservoir for the recovery (or enhanced recovery) of petroleum or another regulated substance; and*
> *(ii) if the licence so provides— the extraction of petroleum or another regulated substance by an artificial means such as in situ gasification or the techniques used to recover coal seam methane;*
> *(b) operations for the processing of regulated substances.*
> *(3) A geothermal production licence authorises, subject to its terms, operations for the extraction or release of geothermal energy.*
> *(4) A gas storage licence authorises, subject to its terms, operations for the use of a natural reservoir for the storage of petroleum or some other regulated substance.*
> *(5) A production licence also authorises (subject to its terms) the licensee to carry out other regulated activities within the licence area.*

In APPEA's view, clause (2)(a)(i) of the South Australian Bill achieves the intent expressed in this Bill and provides a model for the Commonwealth to move forward.

In addition, the discussion paper[15] released by the Victorian Government in January 2008 on its ghg injection and storage legislative and regulatory framework noted

> *... the Petroleum Act 1998 (Vic) permits the holder of a petroleum production licence to inject and store petroleum in reservoirs for the purpose of later recovery. In addition, the Act permits a petroleum operator to inject carbon dioxide for the purpose of enhanced petroleum recovery.*

No changes to these provisions are proposed by Victoria as part of their forthcoming ghg injection and storage legislative and regulatory framework.

The activities currently (or in some cases, proposed) to be undertaken by the holders of petroleum production licences to recover petroleum represent common (activities of this nature are undertaken in petroleum operations around the world) and

[15] See www.dpi.vic.gov.au/DPI/dpinenergy.nsf/9e58661e880ba9e44a256c640023eb2e/b82284e8643ae0bcca25741100153220/$FILE/CCS_web_version.pdf for further information.

long-standing (in many cases, the industry has more than four decades of experience in such activities) industry practice utilised by the upstream oil and gas industry to enhance hydrocarbon activities from operating oil (and natural gas) fields.

Such activities are widely recognised and supported by other jurisdictions around the world:

- the US Department of Energy (DOE) has a specific enhanced oil recovery program in place. The program's goal is to *"enable enhanced recovery of the nation's "stranded" oil resources. DOE's program focuses on evaluating possible candidate locations for future CO_2 injection enhanced oil recovery, utilizing CO_2 from industrial sources, as well as geologic sources"*[16];

- in addition, the January 2008 report from the Canadian ecoENERGY Carbon Capture and Storage Task Force to the Canadian Minister of Natural Resources and the Albertan Minister of Energy, *Canada's Fossil Energy Future: the Way Forward on Carbon Capture and Storage*, found *"EOR using CO_2 injection is already a growing commercial activity and a number of opportunities exist for further EOR development, which helps unlock some commercial value for capturing and injecting CO_2"*[17].

To seek to adversely impact on these activities by seeking to restrict such operations is to put at risk ongoing petroleum recovery activities in many parts of Australia and to put at risk an important aspect of Australia's future energy security. The call for specific public comment appears to stem from a misinterpretation of the purpose of such operations (which sits in stark contrast to the international experience and understanding outlined above). These operations are undertaken for petroleum recovery purposes, either as part of standard or enhanced petroleum recovery purposes; they are not ghg injection and storage activities of neither the type nor the scale contemplated by the Bill.

The industry does not contest (subject to our comments contained in this submission and in the submissions of individual APPEA members) that ghg injection and storage activities unrelated to petroleum production should be regulated by the amendments proposed in the Bill and be subject to the ghg licensing and regulatory regime. The amendments in this area should not, however, impinge on or apply new governing standards to long-standing and legitimate petroleum recovery activities. The Bill should also make clear that the Joint Authority remains the proper avenue for regulatory approvals for such activities.

In addition, the Bill should clarify the language used in the Bill, which may restrict this right to a single specific licence area. APPEA believes clarification of this point is necessary in ensuring the intent of the provision is met and that current rights are preserved. Three examples serve to illustrate this point:

- consider a project where multiple petroleum production licence holders are working together, with part or all of the project members seeking to dispose of carbon dioxide. In such a project, commercially and technically optimal carbon

[16] Further information is available at www.fe.doe.gov/programs/oilgas/eor.
[17] Further information is available at www.nrcan-rncan.gc.ca/com/resoress/publications/fosfos/fosfos-eng.pdf.

dioxide injection for the project across those project licences should not be limited by a production licence specific regime. Many of the largest prospective carbon dioxide injection opportunities/investments around Australia may involve multiple party, multiple joint venture, multiple infrastructure collaborations, together with facilitating commercial agreements. Many of these opportunities may be in areas where non-petroleum sourced carbon dioxide is not material. The production licence specific restriction may slow down and frustrate implementation and lead to non-optimal investment design, hampering petroleum investment and energy supply. The important test for such a project should be that the carbon dioxide is being stored to facilitate petroleum production, not that it is simply indigenous;

- consider a project where as part of the project the oil and gas producer plans to inject the total produced gas stream from one licence (licence 1), which includes carbon dioxide, into one of the reservoirs in another licence (licence 2). The additional licence 1 gas injection is undertaken with the purpose of increasing oil and gas recovery from licence 2. The injected gas from both fields will be produced and sold at a later time. This process is not only important in enhancing the financial viability but provides a greenhouse benefit as a portion of the carbon dioxide injected into licence 2 will remain in place at depletion (noting that the purpose for which the carbon dioxide was injected was the production of petroleum); and

- consider a project where carbon dioxide is recovered from production from a number of offshore licences through an onshore facility, reflecting a mix of all licences producing to the facility. In this case, it is not possible for injection for either enhanced hydrocarbon recovery or disposal to be of the exact carbon dioxide that was produced from a particular (individual) licence area.

APPEA recommends the Bill be amended to:

- confirm that holders of petroleum production licences continue to have the ability that they currently have (subject to obtaining normal regulatory approvals) to do whatever is necessary in the licence area for the purpose of recovering petroleum in the licence area. Specifically, such an ability must include the long-term disposal of carbon dioxide (including incremental investments to dispose of additional carbon dioxide over and above what might otherwise have been required to meet specification or other project limits). APPEA notes that to do anything else would be to remove a right currently enjoyed by pre-commencement title holders; and

- clarify the language used in the Bill, which may restrict this right to a single specific licence area.

In addition, the amendments in the Bill proposed for the end of section 137 restrict the rights conferred by a petroleum production licence by amending the Act to ensure that a petroleum production licence holder is not authorised by statute to:

- inject (whether on an appraisal basis or otherwise) a substance into a geological formation; or

- store (whether on a permanent basis or otherwise) a substance in a part of a geological formation.

This restriction to the rights conferred to petroleum production licence holders is inappropriate, and will impact adversely on ongoing and entirely standard upstream oil and gas operations. APPEA recommends this amendment be removed from the Bill.

3.5 Site closure (sections 249CZE to 249CSM) and the treatment of long-term liabilities (Terms of Reference a), b), d), e))

The defining of long-term liabilities and management of post-closure responsibilities for the long-term underground storage of carbon dioxide is a key ghg injection and storage regulatory priority. Management of long-term liabilities and responsibilities, monitoring of stored carbon dioxide, post closure responsibilities, and specifically the delineation of responsibilities between project proponents and regulators, is vitally important:

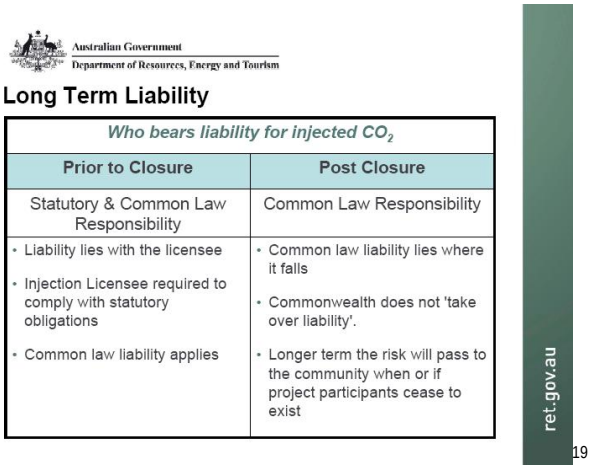
- the responsibilities of the ghg injection and storage proponent, how and when a site can be considered closed and the treatment of long-term liabilities, are all issues that will impact significantly on the viability of ghg injection and storage projects in Australia;

- since 2005, APPEA has suggested an appropriate starting point for the development of legislative provisions to deal with post closure responsibilities is for the project proponent to demonstrate to the regulator that the residual risk associated with the project is acceptably low. This was expressed in the *MCMPR Regulatory Guiding Principles* on page 44 as *"Government will permit site closure when they are satisfied to a high degree of certainty that future land use objectives are met, residual risk of leakage and liability are at an acceptably low level, and ongoing costs associated with the site are acceptably low or can be otherwise managed"*[18].

In this respect, APPEA notes the Bill provides for the transfer of monitoring and verification responsibilities, including responsibility for any remediation or rehabilitation required in the post-closure period, to the Commonwealth once a "site closing certificate" has been issued. The Bill, however, proposes that the common law liabilities of a ghg injection and storage proponent not be modified.

The presentations used by the Department in workshops held around Australia in late May 2008, following the release of the Bill, summarised the provisions in this area as follows:

[18] See www.aph.gov.au/house/committee/pir/exposuredraft/back/back09.pdf for further information.



In summary, liability is intrinsically linked with risk but only exists when a project operator has failed to manage risk accordingly. The upstream oil and gas industry incurs a low cost of liabilities from its activities because the regulations that apply to the industry and the behaviour of companies within the industry have worked to ensure the inherent risks are well managed and do not create liabilities. This is a demonstration that, in this area, the approaches to managing operations in the upstream oil and gas industry are well suited to managing ghg injection and storage projects.

Decommissioning and rehabilitation of ghg injection and storage sites is comparable in many respects with decommissioning and rehabilitation activities related to oil and gas field operations. These relate to the removal of surface plant and equipment and the rehabilitation of the disturbed earth to the satisfaction of the government.

There are well established policies and codes of conduct governing these activities in the Australian upstream oil and gas industry, including the:

- *APPEA Code of Environmental Practice*[20]: APPEA and its member companies are committed to sound resource conservation and environment protection practices as an integral part of industry operations

  - to ensure a high standard of industry operations within our unique environments, APPEA and its members have produced the *Code of Environmental Practice*. It contains substantial detail on all aspects of industry operations within the context of three basic recommendations (i.) environmental planning should be an integral part of the planning process; (ii.) the industry should ensure minimum impact on the environment, public health and safety by using the best practical technology; and (iii.) the industry should consult with communities about their concerns regarding industry activities; and

- *APPEA Principles of Conduct*[21]: APPEA and its member companies have agreed to a set of *Principles of Conduct* to communicate and explain shared core values to industry, regulators, and the communities in which they operate:

[19] See www.aph.gov.au/house/committee/pir/exposuredraft/back/back04.pdf for further information.
[20] See APPEA (1996), *APPEA Code of Environmental Practice*, available at http://www.appea.com.au/content/pdfs_docs_xls/PolicyIndustryIssues/environment/1996EnvCode.pdf.

- the *Principles of Conduct* provide the basis for achieving the APPEA mission of a legislative, administrative, economic and social framework which efficiently and effectively facilitates safe, environmentally responsible, socially responsible and profitable oil and gas exploration, development and production.

APPEA notes the key issue in considering long-term liabilities is to adopt an approach that balances industry certainty and community concerns. The approach adopted in the Bill is that following site closure, proponents have discharged their statutory liabilities but may still be found liable for breaches of generally applicable statutory law and the common law.

Whether such an approach provides sufficient certainty for ghg injection and storage project proponents is unclear. The proposed amendments would leave the project proponent open to common law liabilities for as long as they exist. This may be a barrier to the uptake of ghg injection and storage projects and may not be consistent with the approach taken in other jurisdictions, such as the United States and the European Union[22].

With this in mind, APPEA recommends that the conditions and requirements for the injection phase and immediate post injection monitoring phase (including periods of monitoring) prior to site closure be established with certainty up-front and as long as the assumptions made as to the behaviour of the carbon dioxide plume prove to be correct, those conditions and requirements not change in any material way during the monitoring phase or at site closure time.

This will mean a ghg injection and storage proponent can, with a degree of certainty as to the costs of the project, make upfront commercial decisions as to whether the project is viable. Importantly, this includes some certainty around the costs associated with any long-term monitoring, measurement and verification regime. Under the provisions of the Bill, the ghg injection and storage proponent will be uncertain as to the costs associated with long-term monitoring, measurement and verification until site closure. This potentially open-ended liability is coupled with the requirement to provide securities (the details are which are not spelled out in the Bill) may result in significant cost uncertainty for the ghg injection and storage component and unnecessarily increase the cost of ghg injection and storage activities.

The Bill and any associated regulations should therefore include a requirement of the regulators that they adhere to these principles – no deviation from the conditions and

[21] See *APPEA Principles of Conduct*, available at www.appea.com.au/index.php?option=com_content&task=view&id=12&Itemid=256.

[22] For example, competition between Texas and Illinois in the United States for the location of the FutureGen Project (see fossil.energy.gov/programs/powersystems/futuregen for further deails about the FutureGen Project) resulted in both States passing laws indemnifying the FutureGen proponents from long-term liabilities. In addition, the EU proposed directive on carbon capture and storage (see ec.europa.eu/environment/climat/ccs/eccp1_en.htm for further information)includes provisions that provide for a very clear transfer of liability to government. It is also clear that any liability that might arise following this transfer is the responsibility of government, noting *"Where a storage site has been closed pursuant to points (a) or (b) of Article 17(1), the responsibility for the closed site, including all ensuing legal obligations, shall be transferred to the competent authority on its own initiative or upon request from the operator, if and when all available evidence indicates that the stored CO_2 will be completely contained for the indefinite future. To this end, the operator shall prepare a report documenting that this criterion has been met and submit it to the competent authority for the latter to approve the transfer of responsibility."*

requirements unless established criteria for the project are demonstrated to have changed in a material way during the project.

A key concern that does not appear to have been addressed by the Bill and one that concerns not only liability issues but also any framework of overlapping title relates to potential situations where a ghg injection and storage project impacts an existing petroleum title holder. The Bill adopts the policy position of not introducing any specific liability regime for ghg injection and storage and relying on common law principles.

APPEA notes the lack of an effective statutory regime in these cases does not provide sufficient protection to petroleum producers. APPEA recommends a specific liability regime to encompass such cases be included in the Bill.

4. GREENHOUSE GAS INJECTION AND STORAGE: OTHER COMMENTS ON THE BILL

APPEA's comments on other issues raised by the amendments contained in the Bill are set out below. In making these comments, APPEA's overall objective is to ensure the regulatory framework for the long-term storage of carbon dioxide in Australia allows for the development of ghg injection and storage projects whilst at the same time encouraging the future growth and development of the vitally important Australian upstream oil and gas industry.

The comments therefore take, in a number of places, a somewhat broader perspective than provided for by the Inquiry's terms of reference to consider whether the Bill promotes investment certainty for petroleum activities.

4.1 The need to recognise the positive role the upstream oil and gas industry can play in greenhouse gas injection and storage activities (throughout the Bill but particularly section 249CQ)

As noted above, the oil and gas industry has considerable expertise in utilising and developing the technologies that are required for ghg injection and storage both in Australia and on the international stage[23]. This fact seems to be underappreciated in the Bill.

A case in point is the potential use of depleted fields to store ghg in order to extend the commercial life of established facilities. Under the provisions of the Bill, as currently drafted, particular section 249CQ, such activities would be impeded rather than, as they should be, encouraged.

While section 249CQ provides the ability for petroleum production licence holders to apply for a ghg injection licence over the blocks within the production licence area, it severely curtails this ability by requiring the production licence holder to obtain a declaration of an identified ghg storage formation and that there is no ghg storage assessment permit, holding lease or injection licence over the blocks included in the application and by requiring

[23] Indeed, it is also the case that non-petroleum companies largely do not have relevant expertise or experience, and in fact would be competing with petroleum companies in a very tight market to build such expertise.

that all ghg injected must be obtained as a by-product of petroleum recovery operations under the production lease.

The Bill as drafted would require a competitive bidding arrangement and the production licence holder may or may not, depending on the (as yet unseen) criteria developed to assess bids be the successful bidder. While it could be that developed facilities and the ability to immediately inject may be important components of a bid (together with the accumulation of proprietary knowledge of reservoir behaviour) and that this may favour the production licensee over the other bidders (and APPEA would argue that such factors should be extremely important is assessing bids), this may not always be the case.

It would also appear that, as section 249CH requires an applicant for a ghg injection licence to be a ghg assessment permittee or holding lessee (noting that the grant of a ghg injection licence to the holder of a production licence under section 249CQ may only, as was considered above, be in respect of storage of ghg produced from within the production licence), the petroleum licensee in applying for a ghg injection licence for storage of ghg sourced other than from within his/her licence would have had to first obtain a ghg assessment permit under the competitive bidding regime.

If the production licensee fails to obtain the ghg assessment permit, the subsequent grant of a special ghg holding lease to another company as the successful ghg proponent, could see that ghg proponent "sit" on a special holding lease until such time as the petroleum producer ceases field production.

Such an outcome fails to appreciate that the production licence holder is in this scenario in the best position to develop a ghg storage site. This opportunity is likely to be negated by the legislation. This means that many early opportunities for ghg injection and storage and the associated reductions (of potentially many megatonnes) in ghg emissions, may be unnecessarily impeded by the Bill.

Such an outcome would also be inconsistent with the overarching policy framework within which this Bill sits, which has been characterised by the Minister as a commitment by the Government to "*comprehensive action to tackle climate change, while maintaining Australian jobs and economic prosperity*"[24].

In these circumstances, the "national interest" may be best served by a recognition that ghg injection and storage activities may be progressed – particularly in the short-term – through leveraging to the extent possible on the petroleum companies via their production licence activities.

[24] See www.minister.ret.gov.au/TheHonMartinFergusonMP/Pages/CARBONCAPTUREANDSTORAGEBILLINTRODUCED.aspx.

4.2 Post-commencement petroleum titles (section 79 and 79A, section 145)

The commencement of the amendments contained in this Bill will fundamentally change the legislative and regulatory framework facing the petroleum exploration and production industry, introducing a range of new regulatory requirements. The new framework must be developed and administered in a manner that facilitates the ongoing activities of the upstream oil and gas exploration and production industry in Australia.

Specifically, the Bill imposes new terms and conditions on post-commencement petroleum titles. The Bill impacts on future industry operations by requiring that:

- "key petroleum operations" carried out under a "declared" (post-commencement) petroleum title must be approved by the Minister; and

- all post-commencement production licences must meet the "impact tests".

As APPEA understands it, approval of key petroleum operations are required where any "key petroleum operation" in respect of a post-commencement petroleum title will have a "significant adverse impact" on ghg injection and storage operations that are being, or could be, carried on under an existing ghg title. When approving key petroleum operations the responsible Commonwealth Minister may impose further conditions on the title.

Even if petroleum operations are approved and no conditions are imposed on the title, the applicant will be required to go through a dual regulatory process – the existing Joint Authority/Designated Authority process for petroleum operations and the responsible Commonwealth Minister for any interactions with ghg operations.

APPEA is concerned that this section of the Bill will provide an on-going disincentive to future upstream oil and gas activity through a dilution of legal certainty for oil and gas producers compared to the level of legal certainty associated with pre-commencement activities.

APPEA is also concerned that this provision raises the prospect that oil and gas producers may face liability issues (for pre-commencement title holders) in scenarios where already properly decommissioned wells are not suitable for the injection and storage of ghg. Any requirement to change petroleum decommissioning arrangements to accommodate ghg injection and storage projects could have significant (and inappropriate) cost implications for petroleum title holders[25].

[25] The regulation of the decommissioning of oil and gas facilities is a mature aspect of the petroleum regulatory regime. Decommissioning of offshore petroleum production facilities in Australian waters is subject to the *Petroleum and Submerged Lands Act 1967*, the *Environmental Protection and Biodiversity Conservation Act 1999*, and the *Environment Protection (Sea Dumping) Act 1981* A guideline (see www.ret.gov.au/Documents/DecommissioningGuideline.doc) is in place to provide the company engaged in preparing a proposal for decommissioning of an offshore facility/structure with an overview of the relevant assessment/approval processes. The guideline is currently undergoing a review (in which APPEA is participating) with new a revised guideline to be released in coming months (see www.ret.gov.au/General/Resources-

APPEA recommends the Bill be amended to clarify this issue, by specifying that no liability will accrue to oil and gas producers in a scenario where the well in question has been decommissioned in accordance with current OPA requirements.

In addition, the Bill, under section 145, adds new "impact tests" for all post-commencement production licences. The Minister must be satisfied that each of two tests below is met before granting a post-commencement petroleum production licence. The Bill does not give precedence to either ghg or petroleum applications but provides for a "public interest test" to enable the Minister to prioritise activities where they cannot co-exist.

Again, APPEA is concerned that the way in which this test will operate is not clear from the Bill but has been left to the regulations. APPEA looks forward to detailed consultation on this issue.

4.3 Duration of greenhouse gas assessment permit (section 249AH) (Terms of Reference a))

The Bill, at section 249AH, allows for ghg assessment permits to be granted for a period of six years without a right of renewal. APPEA supports provisions that would prevent the inappropriate holding of ghg assessment permits but suggests that six years may not be a sufficient period to assess such a permit.

APPEA recommends that the Bill be amended to incorporate a single right of renewal subject to a rigorous test based upon the results achieved to-date and the resulting ongoing work program to fully assess the potential within the permit.

4.4 Prohibition of unauthorised exploration for potential greenhouse gas storage formation, or potential greenhouse gas injection site, in offshore area (section 249AC) (Terms of Reference b))

The legislative amendments include as an offence unauthorised exploration for a potential ghg storage formation or a potential ghg gas injection site in an offshore area (and includes imprisonment for 5 years as the penalty). APPEA notes that many of the methods used to explore for petroleum will be the same as will be used to explore for a greenhouse gas storage formation.

Given this, APPEA recommends the Bill be amended to clarify that a petroleum exploration lease holder cannot be deemed to have committed an offence simply because that explorer was undertaking petroleum exploration activities that could reveal a potential ghg storage formation or a potential ghg injection site.

EP/Pages/DecommissioningAustralia'sOffshoreOilandGasFacilities%E2%80%93DevelopmentofNewGuidelines.aspx).

5. THE NEED FOR ONGOING CONSULTATION

As has been noted in various parts of this submission, APPEA considers the Bill should be accompanied by the release of the associated regulations and guidelines and that these regulations and guidelines should be developed and released for consultation with stakeholders as soon as possible.

APPEA looks forward to working closely with the Department to ensure that the future legislative framework for ghg injection and storage in Australia plays a role in driving the early realisation of ghg injection and storage, while providing long-term regulatory certainty, led by industry participants who have existing long-term investment and proven expertise in developing hydrocarbon resources.

APPEA also hopes that there will be a process of ongoing consultation that works towards ensuring State and Federal legislation and their accompanying regulations deal consistently and as seamlessly as possible with the many common issues.

The issues outlined above require further discussion and consideration, so that the resulting legislation and regulation is embraced by stakeholders and delivers its stated objectives.

APPEA looks forward to playing an active and constructive role in these ongoing consultation processes.